

PHASE IIA ENVIRONMENTAL SITE ASSESSMENT REPORT

**MAGNA/NEW PROCESS GEAR FACILITY
6600 NEW VENTURE GEAR DRIVE
DEWITT, ONONDAGA COUNTY, NEW YORK
TTL PROJECT NO.: 600212024**

Prepared for

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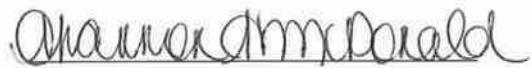
January 4, 2013

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SIGNATURE PAGE

The investigation described in this report was performed by a geologist(s) or qualified environmental professional experienced in hydrogeologic investigations. The information submitted herein, to the best of my knowledge and belief, is true, accurate, and complete. I am aware that there are significant penalties for submitting false information.

Project:
Phase IIA Environmental Site Assessment
Magna/New Process Gear Facility
660 New Venture Gear Drive
Dewitt, Onondaga County, New York
TTL Project No.: 600212024



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1.0 INTRODUCTION

TTL, Inc. (TTL) is pleased to submit this Phase IIA Environmental Site Assessment (ESA) Report for the above-referenced property. Performance of these activities was authorized by electronic correspondence from Mr. Robert Trafford with ONX1, LLC, dated December 4, 2012.

A Phase I ESA (dated September 14, 2012) performed by TTL identified the following recognized environmental conditions (RECs) at the facility:

- An active stormwater pond (Lower Pond) and a former stormwater pond (Upper Pond) on-site, which may have been impacted during recorded and nonrecorded historic spills that entered the stormwater system.
- Historic manufacturing activities, including use of industrial wastewater lines to carry process water and a Wastewater Treatment Plant (WWTP) to treat the water.
- A historic WWTP that operated inside the plant from 1962 to 1970.
- Historic use of aboveground and underground storage tanks to store petroleum, oils, and hazardous chemicals.
- Historic soil and groundwater samples that contained concentrations of metals above local and EPA-established limits.
- Concrete and wood/composite block floors throughout the plant that are saturated with oil.
- A former railroad spur on-site with visibly stained soils.
- An unmarked monitoring well near the southwest corner of the building, near the chip crusher room, not indicated on historic reports for the site.
- Historic hazardous waste generation at the site.

TTL performed a Phase II ESA at the site in November 2012, and advanced 33 probeholes in the locations of the RECs identified in the Phase I ESA to identify potential impacts from historic industrial activities at the site. TTL collected soil and groundwater samples from the probeholes , as well as concrete samples from the plant floors, for comprehensive analyses to identify chemicals of concern (COCs). A *Phase II ESA Report* and a separate *Concrete Sampling and Analysis* report were submitted on December 3, 2012.

Results of the Phase II ESA indicated that concentrations of COCs in both soil and groundwater exceeded the applicable regulatory limits, so TTL performed a Phase IIA ESA at the site from December 10 through 14, 2012, to delineate the extents of impacts to the subsurface.

2.0 PHASE IIA ESA FIELD ACTIVITIES

2.1 Sampling Locations

The Phase IIA ESA involved the advancement of 55 additional probeholes at the site, in areas where concentrations of COCs in soil and/or groundwater samples collected during the November 2012 Phase II ESA exceeded applicable regulatory limits. In addition, probeholes were advanced to delineate petroleum-stained soil observed in certain areas of the site in November 2012.

TTL subcontracted Zebra Environmental (Zebra) to advance the additional 55 probeholes (PH-34 through PH-88) at the site using a Geoprobe 7822DT. Drilling was performed from December 10 through 14, 2012. A Topographic Location Map is included as Figure 1. A Site Map indicating the approximate locations of the probeholes advanced during the initial Phase II ESA is included as Figure 2. Additional probeholes advanced during the Phase IIA ESA were for delineation around initial probeholes PH-1 through PH-4, PH-9, PH-16, PH-18, PH-20, PH-26, and PH-28. Locations of probeholes advanced at the site during the Phase IIA ESA are shown on Figures 3 through 12. A brief explanation of the probehole locations and the corresponding sampling scheme is provided below.

Industrial Wastewater Line between J12 and J13

During the initial subsurface investigation in November 2012, TTL advanced probehole PH-28 into the subsurface near an industrial wastewater line between columns J12 and J13. A soil sample collected from two feet BLS (below land surface) at this probehole contained an elevated concentration of tetrachloroethylene, a VOC (volatile organic compound).

On December 10, 2012, TTL advanced four additional probeholes (PH-34 through PH-37) around probehole PH-28 for the collection of soil samples for VOC analyses (see Figure 3 for locations). TTL also advanced one probehole (PH-38) adjacent to probehole PH-28 for the collection of a deeper soil sample for VOC analysis to evaluate the vertical extent of impacted soil.

Flume Pit 8/9

In November 2012, TTL advanced a probehole (PH-26) adjacent to the industrial wastewater sewer near column L22. Visible staining of soil was noted, and concentrations of SVOCs (semi-volatile organic compounds) in the soil sample collected from this probehole were elevated above regulatory levels. In addition, the concentration of TPH-DRO (total petroleum hydrocarbons – diesel range organics) exceeded TTL's project screening level. Concentrations of VOCs and SVOCs in the groundwater sample also were elevated.

On December 10 and 11, 2012, TTL advanced thirteen additional probeholes (PH-39 through PH-51) in this portion of the plant, starting at probehole PH-26 and moving outwards in all directions (Figure 4). TTL encountered stained soil and groundwater with a strong oily sheen and hydrocarbon odor in multiple probeholes around the edges of Flume Pit 8/9, which is about 15 feet south of the industrial wastewater line that was initially thought to be the source of contamination in this area.

TTL collected soil samples for SVOC and TPH-DRO analyses and groundwater samples, where groundwater was encountered, for VOC and SVOC analyses. In general, probeholes advanced within about 10 feet of the edges of the flume pit were about 20 feet in depth and encountered groundwater in apparent fill material around the edges of the pit, while probeholes advanced more than about 10 feet from the edges of the pit did not encounter groundwater and terminated at shallow shale bedrock (8 to 12 feet BLS).

Based on visual observations there appear to be two distinct types of an oily substance in the subsurface around this pit. On the south and east sides of the pit, a black oily substance was encountered in soil and groundwater about 6 to 22 feet BLS, whereas on the north side of the pit a reddish/amber-colored oil was observed about 12 to 18 feet BLS. TTL attempted to collect samples of the oil itself for analyses; however, due to its viscosity TTL was unable to sample it using a geoprobe methodology.

TTL notes that Flume Pit 8/9 was not inspected during a 2005 infrastructure study; however, adjacent Flume Pit 10/11 was inspected, and according to the infrastructure report, cracking and “possible infiltration of oily substance at bottom of wall cracks on east wall” was noted.

Railroad Spur

There is a former railroad spur along the western side of the plant where raw materials were brought in and completed products shipped out. Probehole PH-16 was advanced adjacent to the railroad spur in November 2012, and visual observations of an oily substance and concentrations of bis(2-ethylhexyl)phthalate, caprolactum, and TPH-DRO in this area indicated impacts to the soil.

On December 12, 2012, TTL advanced nine additional probeholes (PH-62 through PH-70) in a perimeter around probehole PH-16 for the collection of soil samples for SVOC and TPH-DRO analyses (Figure 5).

Industrial Wastewater Line between H35 and J35

During November the 2012 investigation, TTL advanced probehole PH-18 along an industrial wastewater line between columns H35 and J35. No visibly-stained soil was observed at this probehole; however, concentrations of SVOCs in a soil sample collected from 8 feet BLS were elevated.

TTL advanced four probeholes (PH-52 through PH-55) around the original probehole PH-18 on December 11 and 12, 2012 (Figure 6), and collected soil samples for SVOC analyses.

Industrial Wastewater Line by KK36

During the initial investigation, TTL encountered visibly-discolored and stained soil about four feet BLS in probehole PH-20, advanced in the newer portion of the building (southeast) along industrial piping by column KK36. A soil sample collected from this probehole contained an elevated concentration of TPH-DRO, and detection limits for SVOCs were elevated.

On December 12, 2012, TTL advanced six additional probeholes (PH-56 to PH-61) around impacted soil encountered in probehole PH-20 and collected soil samples for analyses for TPH-DRO. Locations of probeholes are shown on Figure 7.

Wastewater Treatment Plant (WWTP)

During the initial subsurface investigation at the site in November 2012, TTL advanced two probeholes (PH-9 and PH-10) into the subsurface beneath the containment at the WWTP. Black staining of soil was observed at probehole PH-9, and a soil sample collected from this probehole contained elevated concentrations of caprolactam (a plasticizer) and TPH-DRO.

On December 13, 2012, TTL advanced five additional probeholes (PH-74 through PH-78 on Figure 8) into the subsurface around initial probehole PH-9, to delineate the extent of impacted soil. Soil samples were analyzed for SVOCs and TPH-DRO. Groundwater was not encountered in this area.

Former Stormwater Pond – Two Intakes

There is a former stormwater pond (referenced in historical reports as the Upper Pond) in the south side of the property, which is currently marked with signs as a “wetland area” and which typically has standing water at land surface. During the initial Phase II ESA, TTL advanced two probeholes (PH-1 and PH-2) near former intakes to the pond, as marked on historical site maps. Concentrations of SVOCs in groundwater samples collected from these probeholes exceeded applicable regulatory levels.

On December 14, 2012, TTL advanced four additional probeholes (PH-79 through PH-82) within about 60 feet of probehole PH-1 (Figure 9) and three probeholes (PH-83 through PH-85) about 50 feet from probehole PH-2 (Figure 10) to collect delineation groundwater samples for SVOC analyses.

Current Stormwater Pond - Intake

In the area of the active stormwater pond (also referenced as Lower Pond) west of the main production facility, soil/sediment and groundwater samples collected from the initial probehole PH-3 in November 2012 contained VOCs and SVOCs at concentrations exceeding the regulatory limits, and soil samples also contained metals exceeding the applicable limits. In addition, soil/sediment was visibly impacted with an oily substance. The TPH-DRO concentration in the soil sample exceeded TTL’s project screening level. Notably, a former Phase II ESA performed at the site in 1995 by Chrysler also referenced “the existence of free hydrocarbons in the form of a sheen on the lagoon surface”, “soil discoloration”, and “stressed vegetation” in this area.

During the current phase of investigations, TTL advanced seven additional hand-auger borings (PH-86, PH-87, and five unnumbered exploratory borings) along the banks of the pond, about one foot into water. In addition, TTL advanced one probehole (PH-88) about 40 feet east of probehole PH-3. Locations of these probeholes are shown on Figure 11.

Current Stormwater Pond - Outfall

Concentrations of SVOCs in the groundwater sample collected from probehole PH-4, advanced along the effluent from the current stormwater pond, exceeded regulatory limits, so TTL advanced three additional probeholes (PH-71 through PH-73) in this area for the collection of additional groundwater samples. Locations of these probeholes are shown on Figure 12.

2.2 Soil Sampling

During probehole/boring advancement, soil samples were collected directly from the auger bucket at hand auger borings. Soil samples were collected from the probeholes with 4-foot long acetate sleeves.

Soil samples for VOC analysis were placed into triplicate 40 milliliter (ml) glass vials (one containing a methanol preservative, and two containing water) and a 60 ml plastic bottle. Soil samples for RCRA metals, SVOC, and TPH-DRO analyses were placed in 4-ounce glass jars. All soil samples were packed on ice for sample preservation and transported on the day of collection to TestAmerica Laboratories, Inc. in Amherst, New York. Soil samples were analyzed for VOCs and SVOCs by Methods 8260 and 8270, total RCRA metals by Method 6010/7470, and TPH-DRO by Method 8015 as outlined in 40 CFR, Part 136.

Soil cuttings were placed in a 55-gallon drum pending receipt of analytical results from soil samples collected from the probeholes.

2.3 Groundwater Sampling

At probeholes where groundwater was encountered and where TTL had proposed the collection of delineation groundwater samples, TTL temporarily installed a one-inch diameter PVC well pipe into each probehole to allow for collection of groundwater samples. Each groundwater sample for VOC analysis was placed into duplicate 40-milliliter vials treated with hydrochloric acid, while samples for SVOC analysis were placed in duplicate 1-Liter amber, glass containers. No delineation samples were required to be collected for analysis for total or dissolved metals, because concentrations of dissolved metals in the initial samples collected in November 2012 did not exceed target levels. All samples were packed on ice in a cooler, for sample preservation, and transported on the day of collection to TestAmerica for analyses. Samples were analyzed for VOCs and SVOCs by Methods 8260 and 8270.

3.0 INVESTIGATION RESULTS

During advancement of each probehole, TTL's field geologist recorded lithologic and other information on boring logs (Appendix A). Portions of the site are underlain by fill material, varying from 0 to 4 feet below land surface. Beneath the fill material (where present), a silt or gravelly silt was encountered. The silt became increasingly stiff with depth. Probehole refusal was generally encountered at a siltstone or shale interface. Field observations generally support the findings of previous environmental reports reviewed.

The VOCs, SVOCs, total RCRA metals, and TPH-DRO detected in soil samples collected during both the November and December phases of investigation are summarized in Tables 1, 2, and 3, respectively. The VOCs and SVOCs detected in the groundwater samples collected during the Phase II and Phase IIA ESAs are summarized in Tables 4 and 5. The laboratory reports are provided in Appendix B.

Soil cleanup objectives (SCOs) published in 6 NYCRR Part 375 and Supplemental Soil Cleanup Objectives (SSCOs) published in DEC Policy CP-51/Soil Cleanup Guidance are included in the soil analytical tables for reference. For the Unrestricted Use SCOS and SSCOs, the lowest target concentration for protection of human health, groundwater, and ecological resources was used. Water Quality Standards (WQS) published in 6NYCC Part 703: Surface Water and Groundwater Quality Standards and Groundwater Effluent Limitations are included in the groundwater analytical tables for reference. For chemicals that did not have a WQS, the Guidance Value (GV) provided in Table 1 of the Division of Water Technical and Operational Guidance Series (TOGS) 1.1.1, dated 1998, was used for comparison.

Analytical results of soil and groundwater samples collected from the various areas of the plant that were included in the Phase IIA investigation are summarized below. Also included are the analytical results of the soil and groundwater samples collected in these same areas during the November 2012 investigation.

Industrial Wastewater Line between J12 and J13

The following summarizes the laboratory results for the soil samples collected from probehole PH-28 (November 2012) and probeholes PH-34 through PH-38 (December 2012):

- Acetone was detected in the sample collected from probehole PH-37 (0.052 mg/Kg) at a concentration slightly above the Unrestricted Use SCO of 0.05 mg/Kg, but below the Restricted (Industrial) Use value of 1,000 mg/Kg.
- Tetrachloroethylene, detected above regulatory limits during the initial Phase II ESA in the soil sample collected at 2 feet BLS from probehole PH-28, was also detected in the deeper soil sample collected from 8 feet BLS from probehole PH-3 (which was advanced adjacent to probehole PH-28), at a concentration of 0.043 mg/Kg, which is below the Unrestricted Use SCO of 1.3 mg/Kg.
- Tetrachloroethylene was also detected in the samples collected from probeholes PH-34 (1.100H mg/Kg), PH-35 (0.0047 mg/Kg), and PH-36 (0.0041J mg/Kg). The ‘H’ flag indicates that the sample was analyzed for this constituent outside the holding time, which could result in a lower reported concentration. The “J” flag indicates the detected concentration is an estimate value, above the method detection limit but below the reporting limit. There is no established SCO for TPH-DRO.

Based on analytical results of soil samples collected in this area, TTL concludes the area of impact from tetrachloroethylene above regulatory limits (from probehole PH-28 advanced in the initial Phase II ESA) is limited to the vicinity of probehole PH-28, and to a depth of less than 8 feet. Assuming an impacted area of 10 feet by 10 feet by 5 feet deep, the volume of impacted soil is approximately 20 cubic yards.

Flume Pit 8/9

The following summarizes the laboratory results for the soil samples collected from probehole PH-26 (November 2012) and probeholes PH-39 through PH-51 (December 2012):

- No VOCs were detected at concentrations above the Unrestricted Use SCOs in the sample collected from PH-26. No other samples collected in this area were analyzed for VOCs.
- No SVOCs were detected at concentrations above the Unrestricted Use SCOs.
- TPH-DRO was detected in the soil samples collected from probeholes PH-26 and PH-39 through PH-51 at concentrations ranging from 7.6J mg/Kg at probehole PH-49, to 5,500H mg/Kg at probehole PH-26. There is no established SCO for TPH-DRO. TTL typically uses a screening level of 100 mg/Kg when delineating hydrocarbon contamination.

The following summarizes the laboratory results for the groundwater samples collected from probeholes PH-26 and PH-40. No other groundwater samples were collected from this area (reference Section 2.1 for a discussion of groundwater sampling efforts).

- Acetone (62 ug/L) and cis-1,2-dichloroethene (5.3 ug/L) were detected in the groundwater sample collected from probehole PH-26 above their respective WQS. No other VOC constituents were detected above their respective WQS.
- Bis(2-ethylhexyl)phthalate was detected in the groundwater samples collected from probeholes PH-26 (8.300 mg/L) and PH-40 (0.110J mg/L) at concentrations above the Water Quality Standard of 0.005 mg/L. No other SVOCs were detected in the groundwater sample collected from probeholes PH-26 and PH-40 at concentrations above the WQS or GV.

Based on visual observations and analytical results, as much as 21,000 square feet of soil beneath and around Flume Pit 8/9 may be impacted. Using an average thickness of impacted soil of 8 feet, TTL estimates that as many as 6,500 cubic yards of soil, some containing groundwater, is impacted in this area.

Railroad Spur

The following summarizes the laboratory results for the soil samples collected from probehole PH-16 (November 2012) and probeholes PH-62, PH-64, PH-66, and PH-68 through PH-70 (December 2012):

- No VOCs were detected at concentrations above the Unrestricted Use SCOs in the sample collected from probehole PH-16. No other samples collected from this area were analyzed for VOCs.
- No SVOCs were detected at concentrations above the Unrestricted Use SCOs.
- TPH-DRO was detected in the soil samples collected from probeholes PH-16, PH-64, PH-66, and PH-68 through PH-51 at concentrations ranging from 11J mg/Kg at probehole PH-69, to 1,600H mg/Kg at probehole PH-16. There is no established SCO for TPH-DRO. TTL typically uses a screening level of 100 mg/Kg when delineating hydrocarbon contamination.

Based on visual observations of where stained soil was encountered, and the analytical results, about 600 to 900 cubic yards of soil in a narrow band (about 15 feet out from the railroad tracks) are impacted along the railroad tracks with a diesel-like substance.

Industrial Wastewater Line between H35 and J35

The following summarizes the laboratory results for the soil samples collected from probehole PH-18 (November 2012) and probeholes PH-52 through PH-55 (December 2012):

- No VOCs were detected at concentrations above the Unrestricted SCOs in the soil sample collected from probehole PH-18. No other samples collected in this area were analyzed for VOCs.
- No SVOCs were detected in probeholes PH-52 through PH-55 (December 2012) at concentrations above the Unrestricted Use SCOs. In the initial Phase II ESA, a soil sample collected from probehole PH-18 exhibited a di-n-butyl phthalate concentration of 0.100J mg/Kg, which exceeded the Unrestricted SCO, but was below the Restricted (Industrial) Use value.

Based on analytical results of soil samples collected in this area, TTL concludes the area of impact from di-n-butyl phthalate above regulatory limits (from probehole PH-18 advanced in the initial Phase II ESA) is limited to the vicinity of probehole PH-18, and to a depth of less than 8 feet. Assuming an impacted area of 10 feet by 10 feet by 5 feet deep, the volume of impacted soil is approximately 20 cubic yards.

Industrial Wastewater Line by KK36

The following summarizes the laboratory results for the soil samples collected from probehole PH-20 (November 2012) and probeholes PH-58 and PH-59 (December 2012):

- No VOCs or SVOCs were detected at concentrations above the Unrestricted SCOs in the soil sample collected from probehole PH-20. No other samples collected in this area were analyzed for VOCs or SVOCs.
- TPH-DRO was detected in the soil samples collected from probeholes PH-20, PH-58, and PH-59 at concentrations of 3,000H mg/Kg, 16J mg/Kg and 6.5J mg/Kg, respectively. There is no established SCO for TPH-DRO. TTL typically uses a screening level of 100 mg/Kg when delineating hydrocarbon contamination.

Based on where TTL observed the stained soil, TTL believes that impacted soil in this area is limited in extent to an approximate 100-square foot area around a manhole to the industrial sewer. Impacted soil is estimated at approximately 10 cubic yards.

Wastewater Treatment Plant (WWTP)

The following summarizes the laboratory results for the soil samples collected from probehole PH-9 (November 2012) and probeholes PH-74 through PH-78 (December 2012):

- No VOCs or SVOCs were detected at concentrations above the Unrestricted SCOs in the soil sample collected from probehole PH-9. No other samples collected in this area were analyzed for VOCs or SVOCs.
- TPH-DRO was detected in the soil samples collected from probeholes PH-9 and PH-74 through PH-78 at concentrations ranging from 5.7J mg/Kg at probehole PH-75, to 6,200H mg/Kg at probehole PH-9. There is no established SCO for TPH-DRO. TTL typically uses a screening level of 100 mg/Kg when delineating hydrocarbon contamination.

Based on visual observations about 100 cubic yards of soil, at about six to seven feet BLS (below land surface) appear to be contaminated.

Former Stormwater Pond – Two Intakes

The following summarizes the laboratory results for the groundwater samples collected from probeholes PH-1, PH-2, and PH-83 through PH-85:

- No VOCs were detected at concentrations above WQS or GV in the groundwater samples collected from probeholes PH-1 and PH-2. No other groundwater samples collected in this area were analyzed for VOCs.
- Benzo(a)anthracene was detected above the GV of 0.002 ug/L in the samples collected from probeholes PH-1 (4.3J ug/L) and PH-2 (1.1J ug/L).
- Benzo(a)pyrene was detected above the WQS of non-detect in the samples collected from probeholes PH-1 (5.3 ug/L) and PH-2 (1.4J ug/L).
- Benzo(b)fluoranthene was detected above the GV of 0.002 ug/L in the samples collected from probeholes PH-1 (7.3 ug/L) and PH-2 (1.8J ug/L).

- Bis(2-ethylhexyl)phthalate was detected above the WQS of 5 ug/L in the samples collected from probeholes PH-1 (11 ug/L) and PH-2 (8.5 ug/L).
- Chrysene was detected above the GV of 0.002 ug/L in the samples collected from probeholes PH-1 (5.0 ug/L) and PH-2 (1.2J ug/L).
- Indeno(1,2,3-cd)pyrene was detected above the GV of 0.002 ug/L in the samples collected from probeholes PH-1 (2.0J ug/L) and PH-2 (0.56J ug/L).
- 4-Nitroaniline was detected in the groundwater sample collected from probehole PH-83 (12 ug/L) at a concentration above the WQS of 0.005 mg/L. 4-Nitroaniline was not detected in any other soil or groundwater sample collected from the site.

Based on analytical results, the area of impacted groundwater appears to be limited to the immediate vicinity of the former stormwater pond.

Current Stormwater Pond - Intake

TTL observed that the sediments at the probehole (PH-3) advanced during the November 2012 investigation and at each of the seven probeholes advanced during the December 2012 investigation along the banks of the pond are visually stained with a thick, black substance with an oily sheen, exhibiting an odor similar to used oil. TTL did NOT observe staining in probehole PH-88 and thus anticipates that the impact is confined to the immediate shores and base of the pond. Based on these observations and analytical results, TTL anticipates that a volume of sediment about 4,000 cubic yards is impacted and should be removed and properly disposed.

The following summarizes the laboratory results for the soil samples collected from probeholes PH-3, PH-87, and PH-88:

- Acetone (0.140 mg/Kg) was detected in the sample collected from probehole PH-3 at a concentration above the Unrestricted Use SCO of 0.05 mg/Kg, but below the Restricted (Industrial) Use value of 1,000 mg/Kg.
- 2-Methylnaphthalene (10.000J mg/Kg) was detected in the sample collected from probehole PH-3 at a concentration above the Unrestricted Use SSCO of 0.41 mg/Kg. There was no Restricted (Industrial) SCO provided.
- Acenaphthene (61.000J mg/Kg), fluoranthene (670.000 mg/Kg), fluorene (51.000J mg/Kg), phenanthrene (490.000 mg/Kg), and pyrene (470.000 mg/Kg) were all detected

above their respective Unrestricted Use SCOs, but below the Restricted (Industrial) Use SCOs in the sample collected from probehole PH-3.

- Benzo(a)anthracene (270.000 mg/Kg), benzo(a)pyrene (210.000 mg/Kg), benzo(b)fluoranthene (280 mg/Kg), benzo(k)fluoranthene (140.000 mg/Kg), chrysene (270.000 mg/Kg), and dibenz(a,h)anthracene (26.000 mg/Kg) were all detected above both their Unrestricted Use and Restricted (Industrial) Use values in the sample collected from probehole PH-3.
- Total lead (67.2 mg/Kg) and mercury (0.24 mg/Kg) were detected above their respective Unrestricted Use SCOs, but below their respective Restricted (Industrial) Use SCO in the sample collected from probehole PH-3. No other metals were detected above the Unrestricted Use SCOs in this sample.
- No VOCs, SVOCs, or total RCRA metals were detected above their respective Unrestricted Use SCOs in the samples collected from probeholes PH-87 or PH-88.
- TPH-DRO was detected in the soil samples collected from probeholes PH-3 (4,800H mg/Kg), PH-87 (370 mg/Kg), and PH-88 (6.1J mg/Kg). There is no established SCO for TPH-DRO. TTL typically uses a screening level of 100 mg/Kg when delineating hydrocarbon contamination.

The following summarizes the laboratory results for the groundwater samples collected from probeholes PH-87 and PH-88:

- Dichlorodifluoromethane [(54 micrograms per Liter (ug/L)] and toluene (13 ug/L) were detected in the sample collected from probehole PH-3 above their respective WQS. No other VOC constituents were detected above their respective WQS or GV.
- Acenaphthene was detected above the GV of 20 ug/L in the sample collected from probehole PH-3 (42J ug/L).
- Anthracene was detected above the GV of 50 ug/L in the sample collected from probehole PH-3 (52 ug/L).
- Benzo(a)anthracene was detected above the GV of 0.002 ug/L in the sample collected from probehole PH-3 (250 ug/L).
- Benzo(a)pyrene was detected above the WQS of non-detect in the sample collected from probehole PH-3 (260 ug/L).

- Benzo(b)fluoranthene was detected above the GV of 0.002 ug/L in the sample collected from probehole PH-3 (380 ug/L).
- Benzo(k)fluoranthene was detected above the GV of 0.002 ug/L in the sample collected from probehole PH-3 (150 ug/L).
- Bis(2-ethylhexyl)phthalate was detected above the WQS of 5 ug/L in the sample collected from probehole PH-3 (110 ug/L).
- Chrysene was detected above the GV of 0.002 ug/L in the sample collected from probehole PH-3 (240 ug/L).
- Fluoranthene was detected above the GV of 50 ug/L in the sample collected from probehole PH-3 (500 ug/L).
- Indeno(1,2,3-cd)pyrene was detected above the GV of 0.002 ug/L in the sample collected from probehole PH-3 (74 ug/L).
- Phenanthrene was detected above the GV of 50 ug/L in the sample collected from probehole PH-3 (280 ug/L).
- Pyrene was detected above the GV of 50 ug/L in the sample collected from probehole PH-3 (430 ug/L).
- No VOCs or SVOCs were detected in the groundwater samples collected from probeholes PH-87 and PH-88 at concentrations above the WQS or GV.

Current Stormwater Pond - Outfall

The following summarizes the laboratory results for the groundwater samples collected from probeholes PH-4 and PH-71 through PH-73:

- No VOCs were detected above the applicable WQA or GV in the groundwater sample collected from probehole PH-4. No other groundwater samples collected in this area were analyzed for VOCs.
- Benzo(a)anthracene was detected above the GV of 0.002 ug/L in the sample collected from probehole PH-4 (0.52J ug/L).
- Benzo(a)pyrene was detected above the WQS of non-detect in the sample collected from probehole PH-4 (0.52J ug/L).
- Benzo(b)fluoranthene was detected above the GV of 0.002 ug/L in the sample collected from probehole PH-4 (0.70J ug/L).

- Bis(2-ethylhexyl)phthalate was detected above the WQS of 5 ug/L in the samples collected from probeholes PH-3 (110 ug/L) and PH-71 (5.2 ug/L).
- Chrysene was detected above the GV of 0.002 ug/L in the sample collected from probehole PH-4 (0.56J ug/L).

The down-gradient area of impacted groundwater appears to be limited to the immediate vicinity of probehole PH-4.

4.0 RECOMMENDATIONS

TTL recommends that this report be submitted to the NYSDEC for review, and determination of the path forward to close out the Spill Incident.

FIGURES



4154 Lomac Street ■ Montgomery, Alabama 36106
334-244-7066 Fax: 334-244-6668

TTI PROJECT NO: 600212024
PROJECT DATE: December 3, 2012

Figure 1. Topographic Location Map

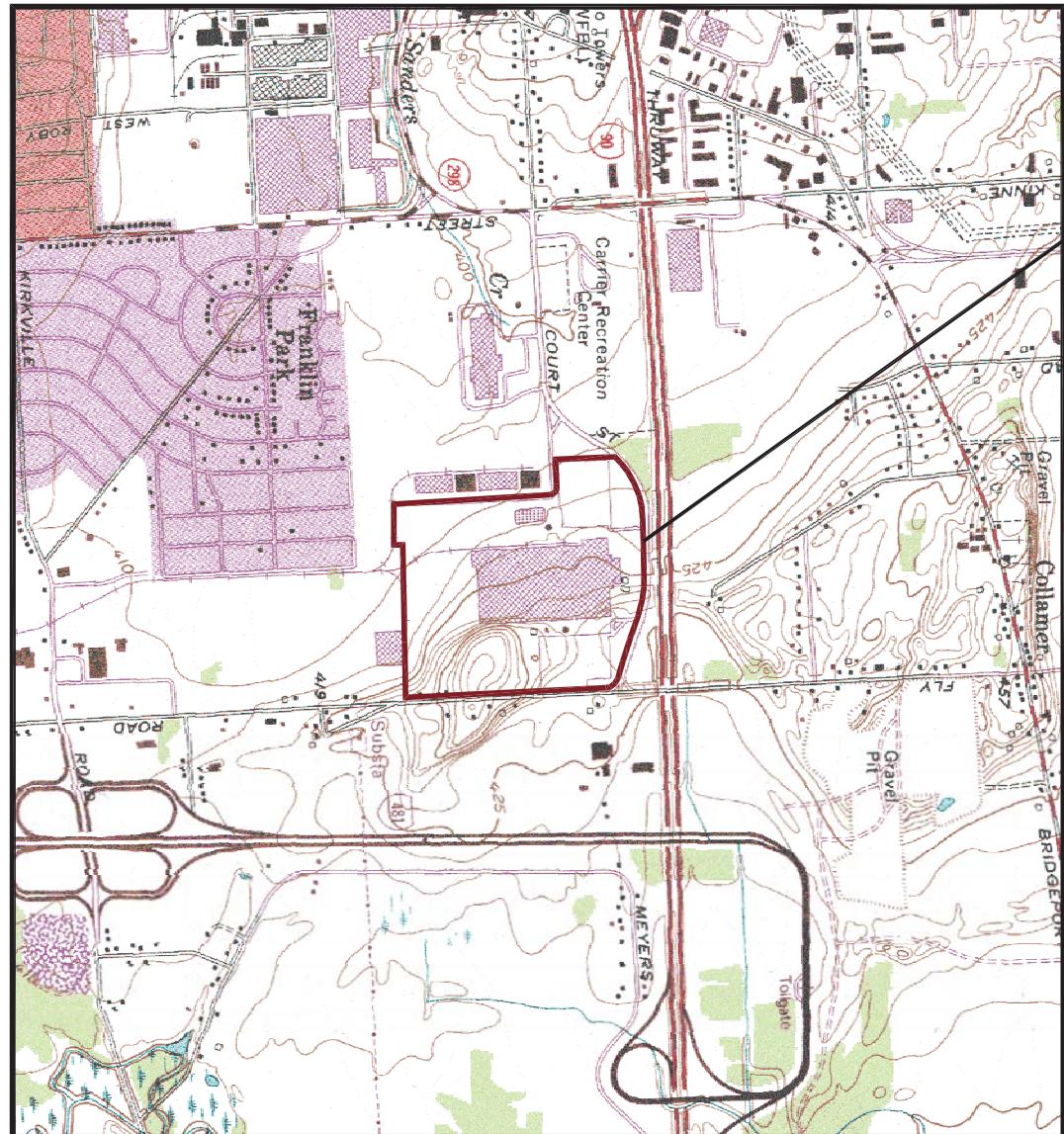
Draft Phase IIA ESA

Magna/New Process Gear Facility (127± Acres)

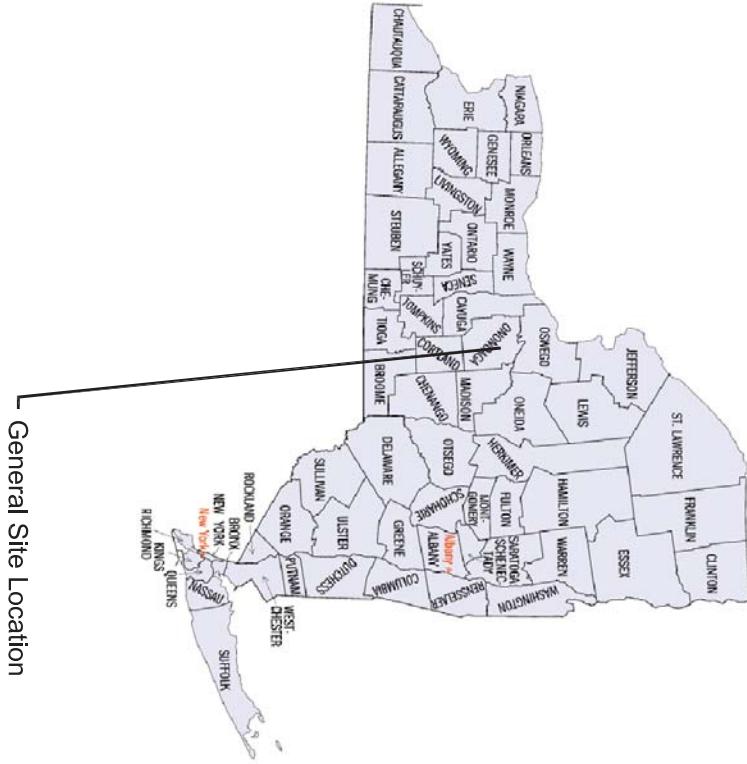
6600 New Venture Gear Drive
Dewitt, Onondaga County, New York

Source: USGS Syracuse East N.Y. 7.5 Minute Quadrangle Map, 1957 (Photorevised 1978)

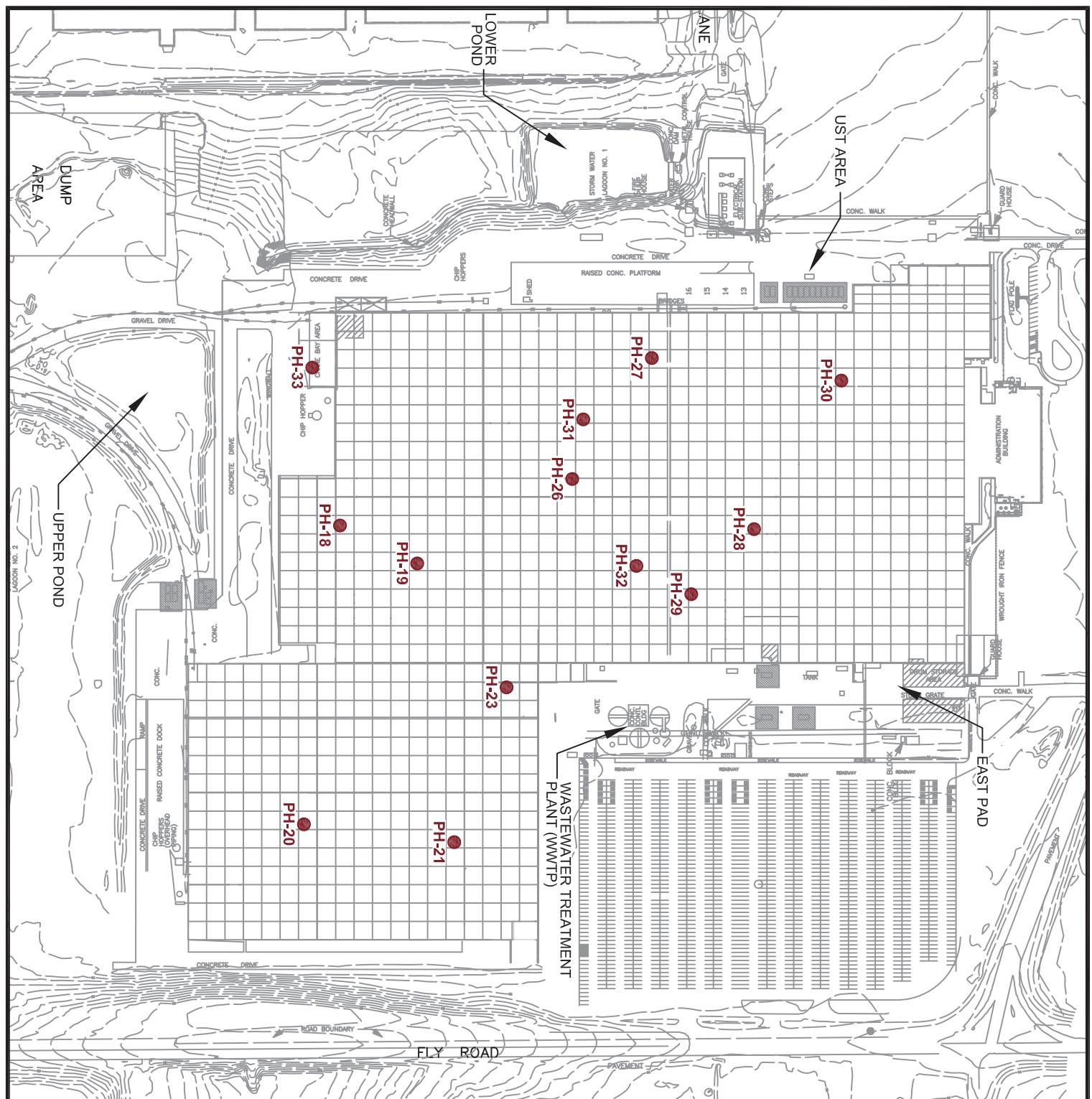
1" = 2000'
(Approximate)



General Site Location



Approximate Site Boundary



4154 Lomac Street ■ Montgomery, Alabama 36106
334.244.0768 ■ Fax: 334.244.9668

SCALE:

1" = 300'

DRAWING PATH:

DATE CREATED: 12/03/2012 DATE REVISED: n/a REVISION NUMBER: n/a

TTL PROJ. NO.:

600212024

DRAWN BY: mjc CHECKED BY: SGR

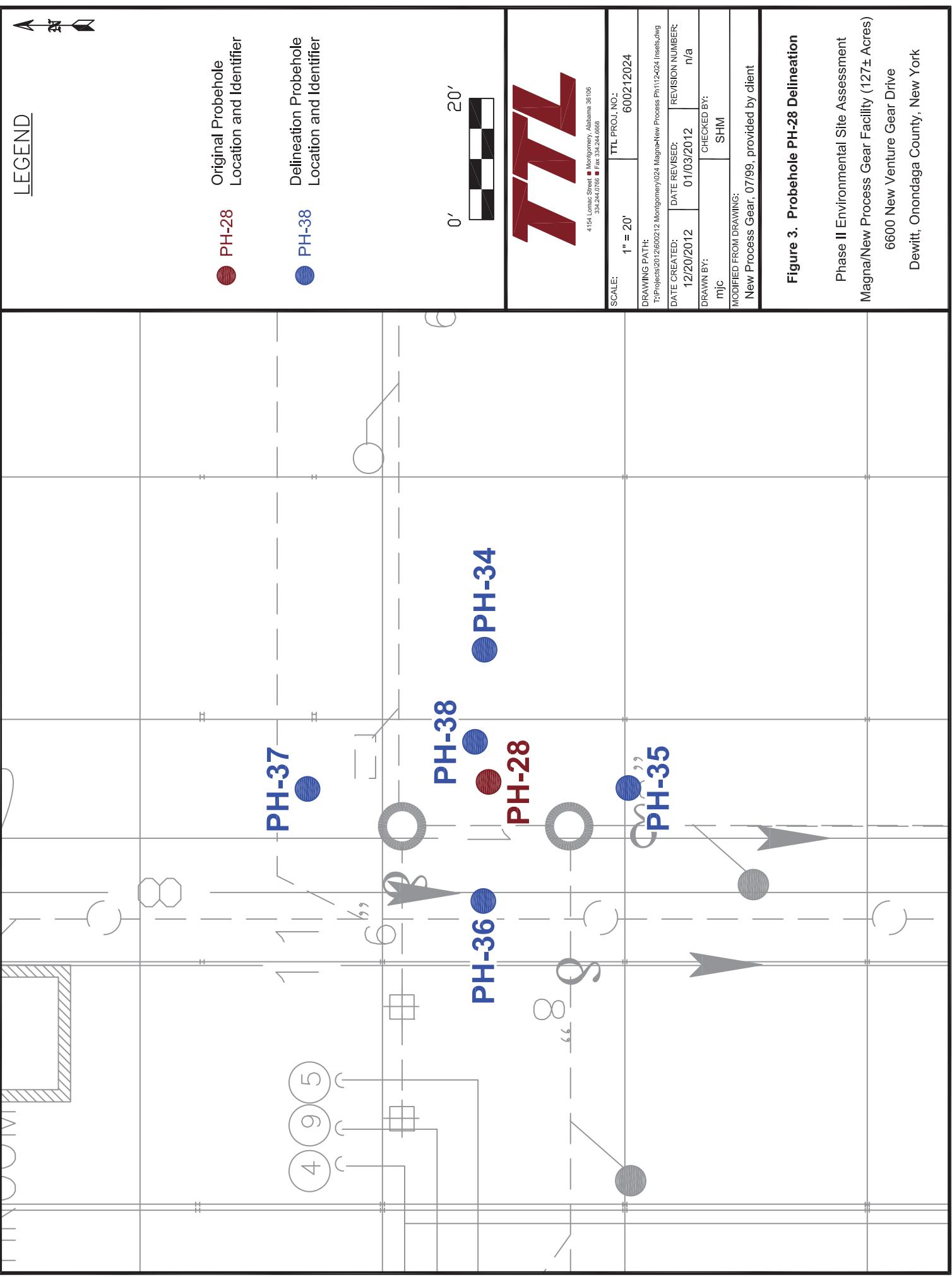
MODIFIED FROM DRAWING:
New Process Gear, 07/99, provided by client

Figure 2. Site Map

Draft Phase IIIA ESA Report

Magna/New Process Gear Facility (127± Acres)

6600 New Venture Gear Drive
Dewitt, Onondaga County, New York



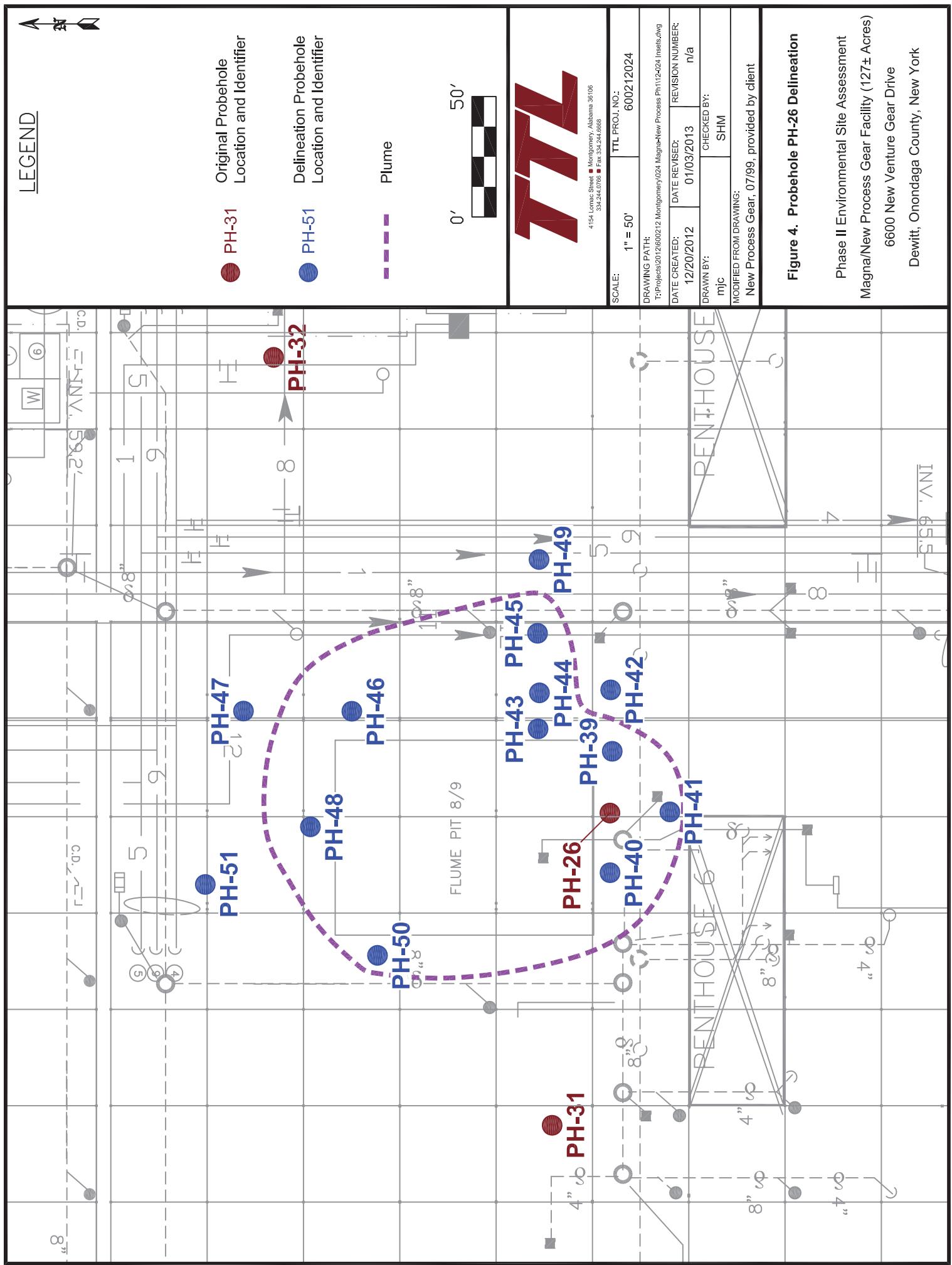
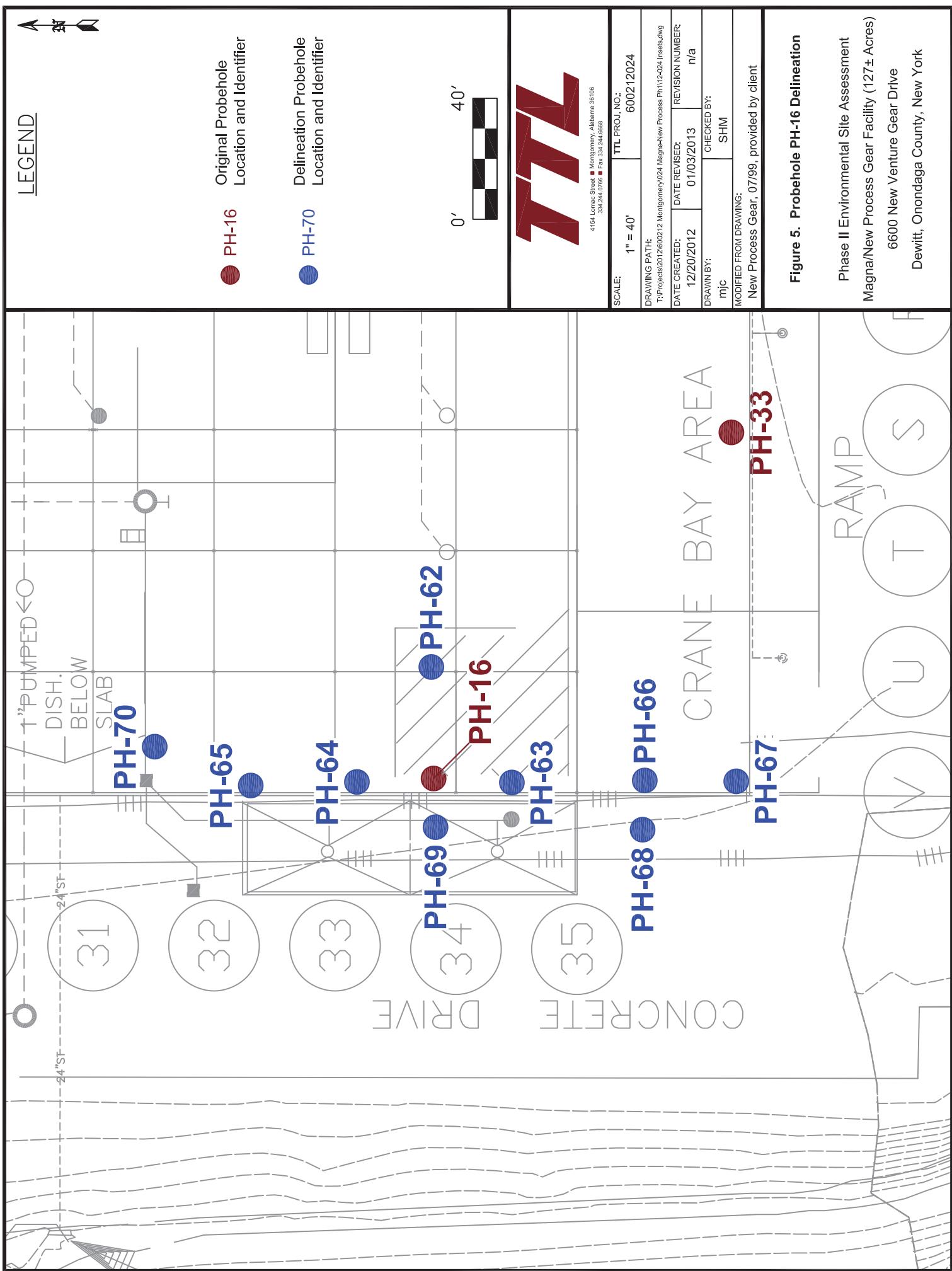
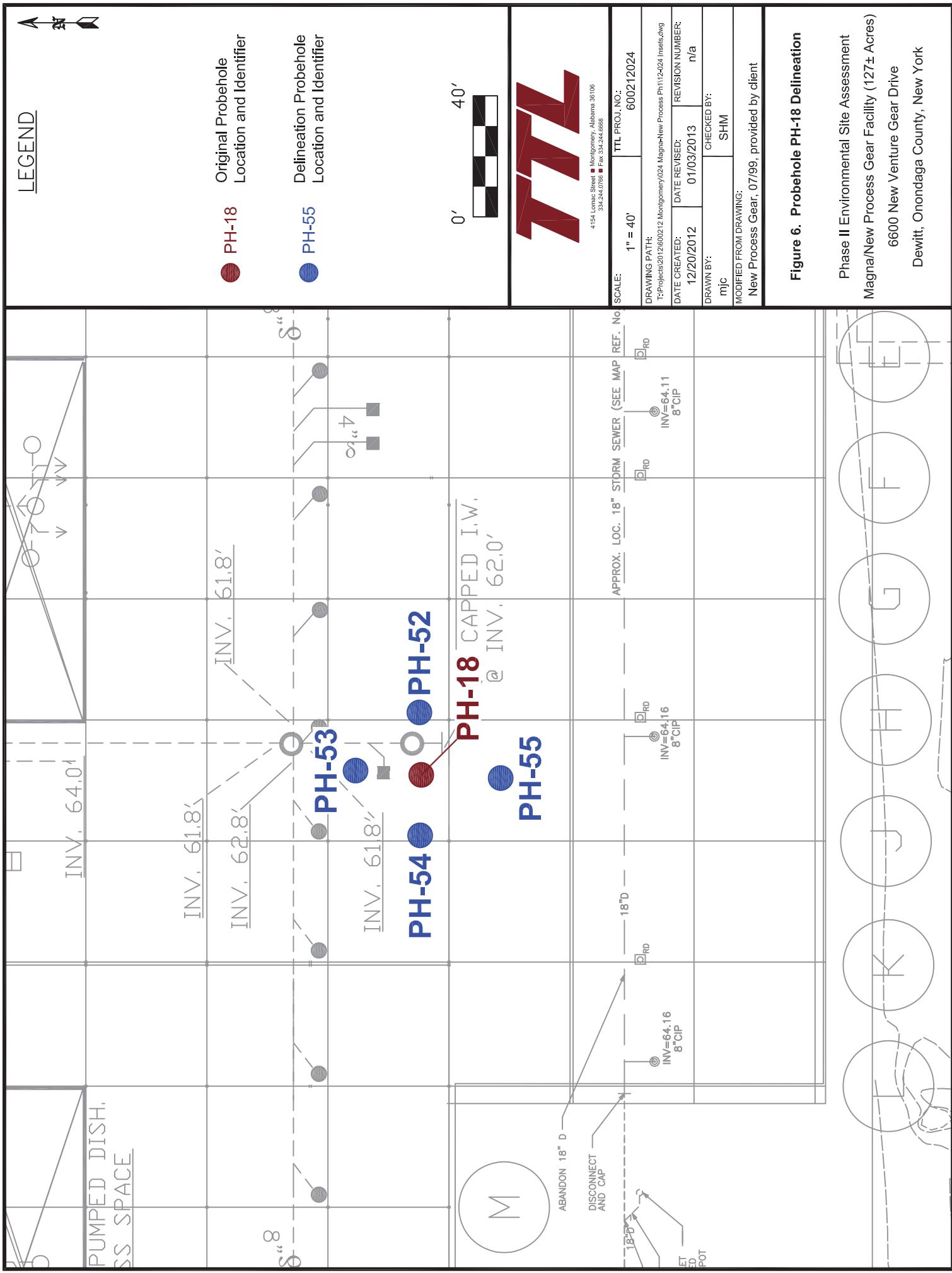
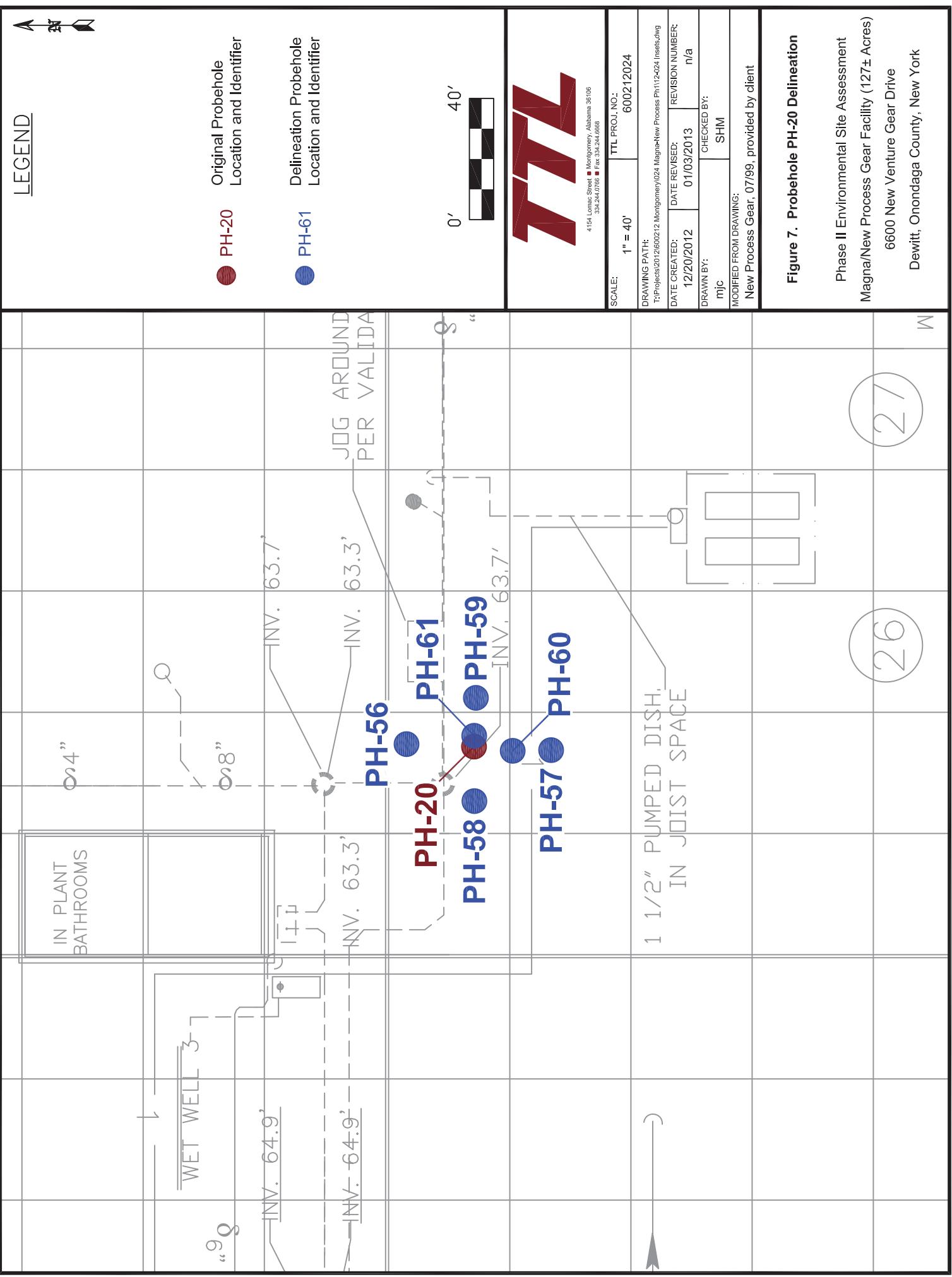


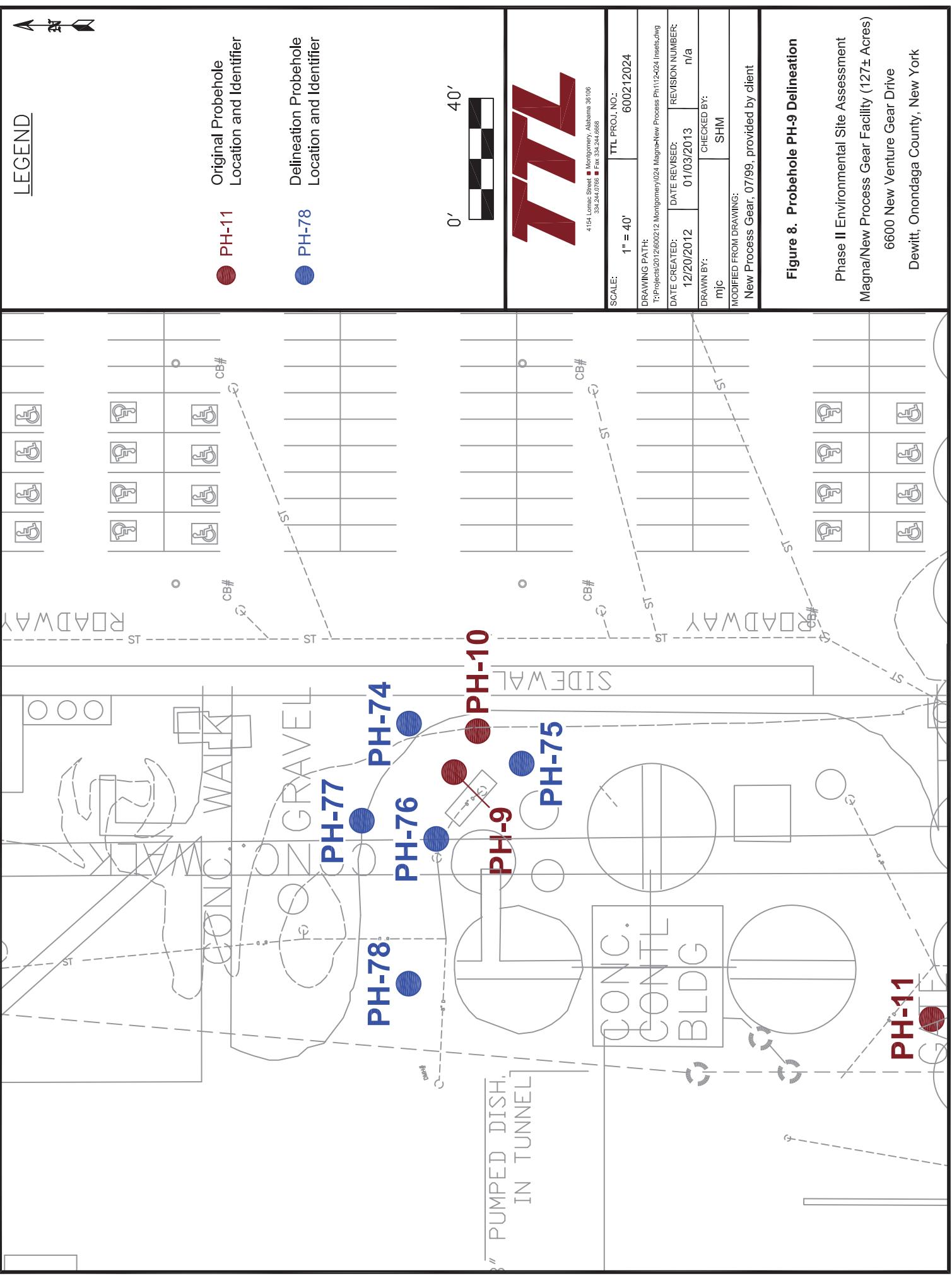
Figure 4. Probehole PH-26 Delineation

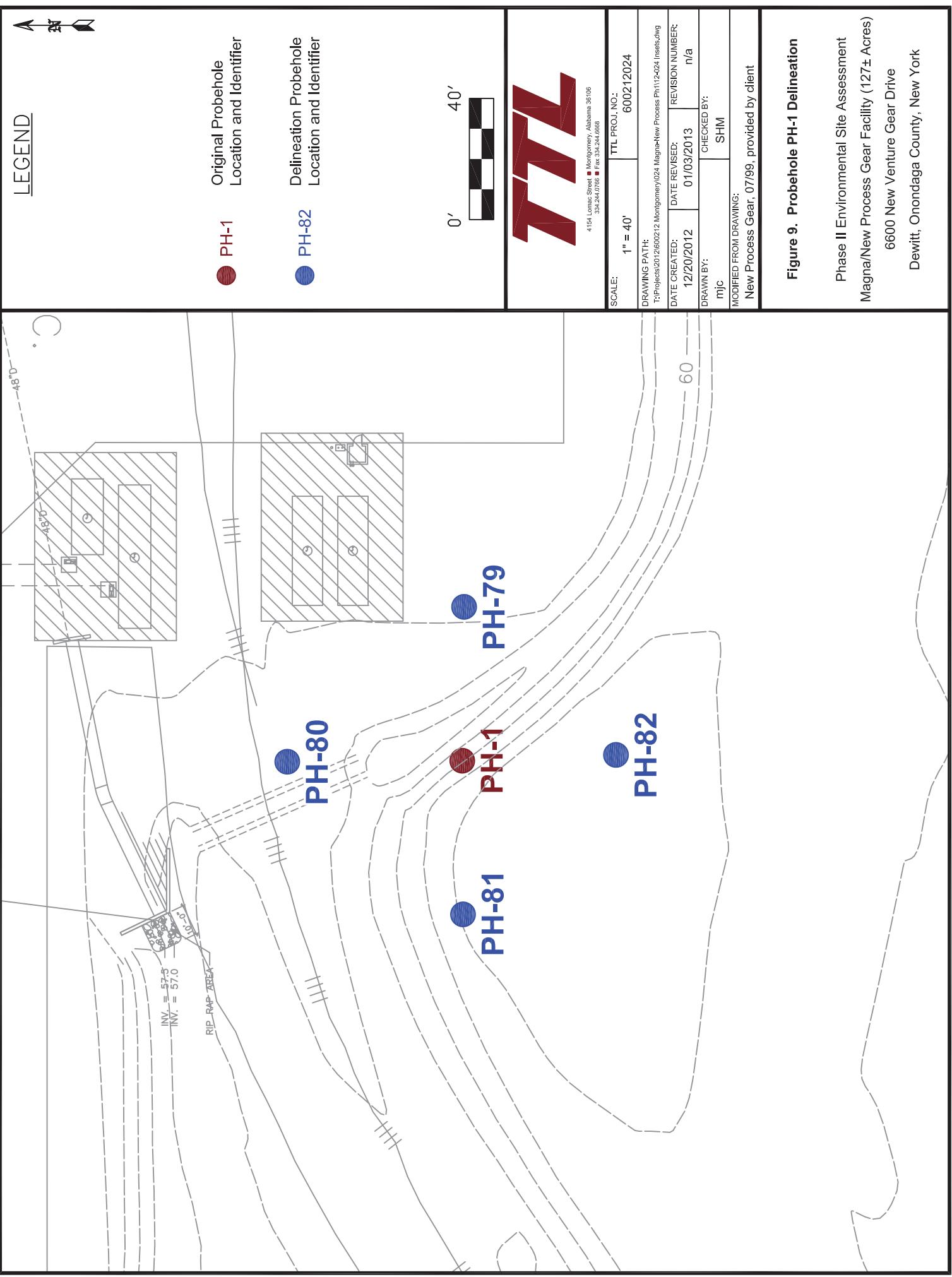
Phase II Environmental Site Assessment
Magna/New Venture Gear Facility (127± Acres)
6600 New Venture Gear Drive
Dewitt, Onondaga County, New York

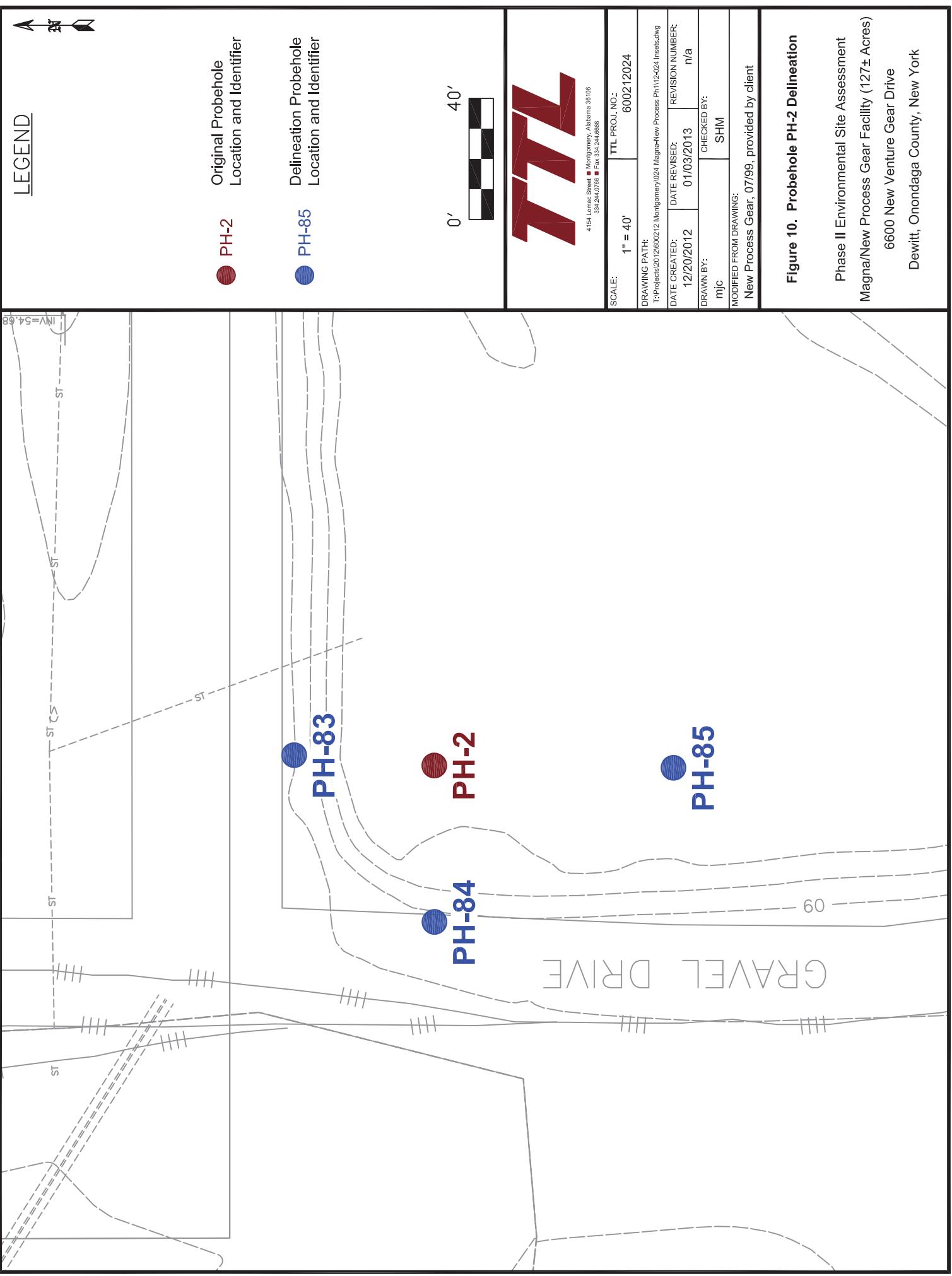


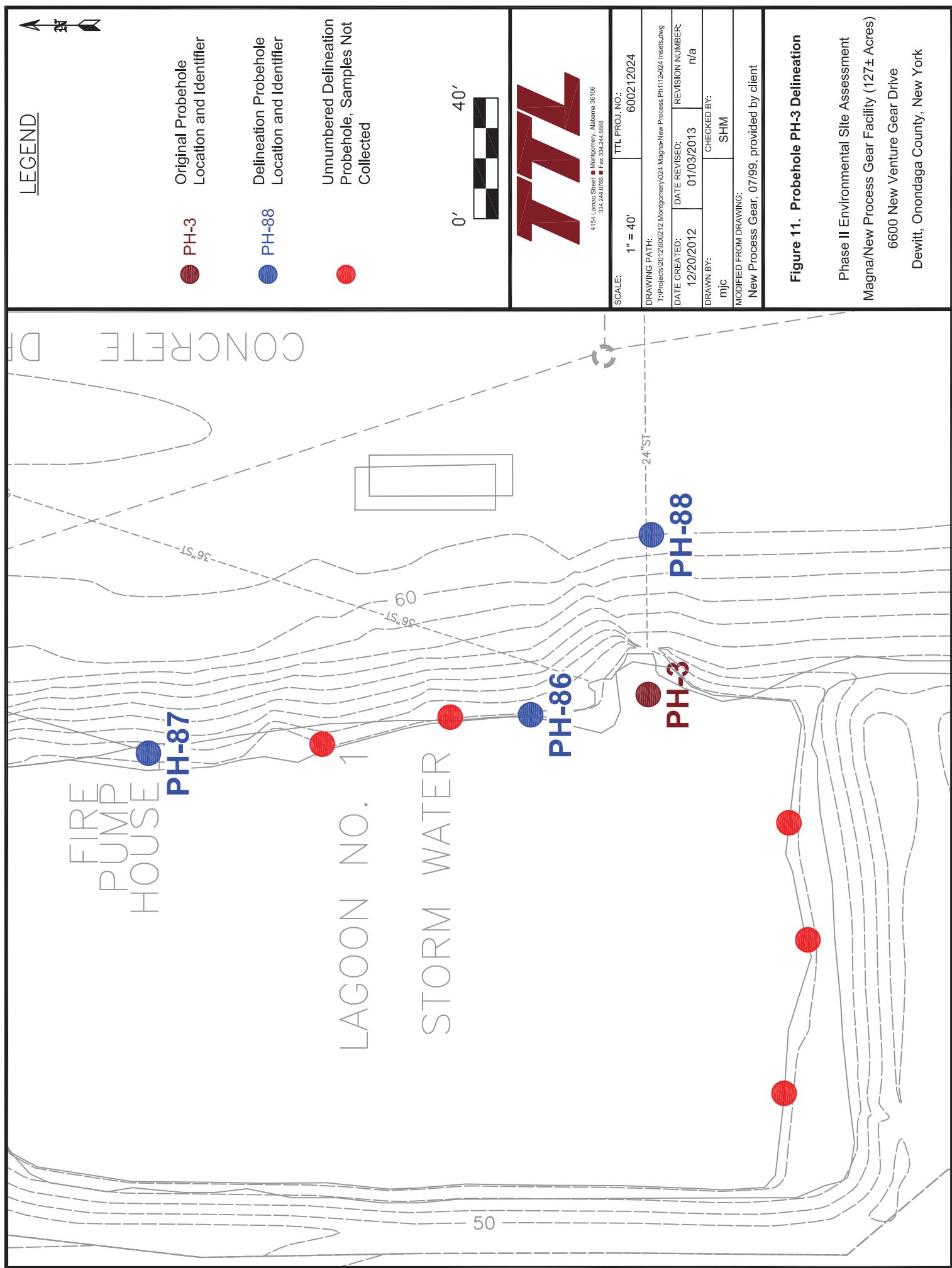












LEGEND

● PH-4 Original Probehole Location and Identifier

● PH-87 Delineation Probehole Location and Identifier

Unnumbered Delineation Probehole, Samples Not Collected



4154 Lomac Street ■ Montgomery, Alabama 36106 334.244.0766 ■ Fax: 334.244.6668	DRAWING PATH: T:\Projects\2012\60212\Montgomery\024 Magna-New Process Ph1\112424\Insets.dwg	REVISION NUMBER: n/a
SCALE: 1" = 40'	TTL PROJ. NO.: 600212024	
DRAWN BY: mjc	CHECKED BY: SHM	MODIFIED FROM DRAWING: New Process Gear, 07/99, provided by client

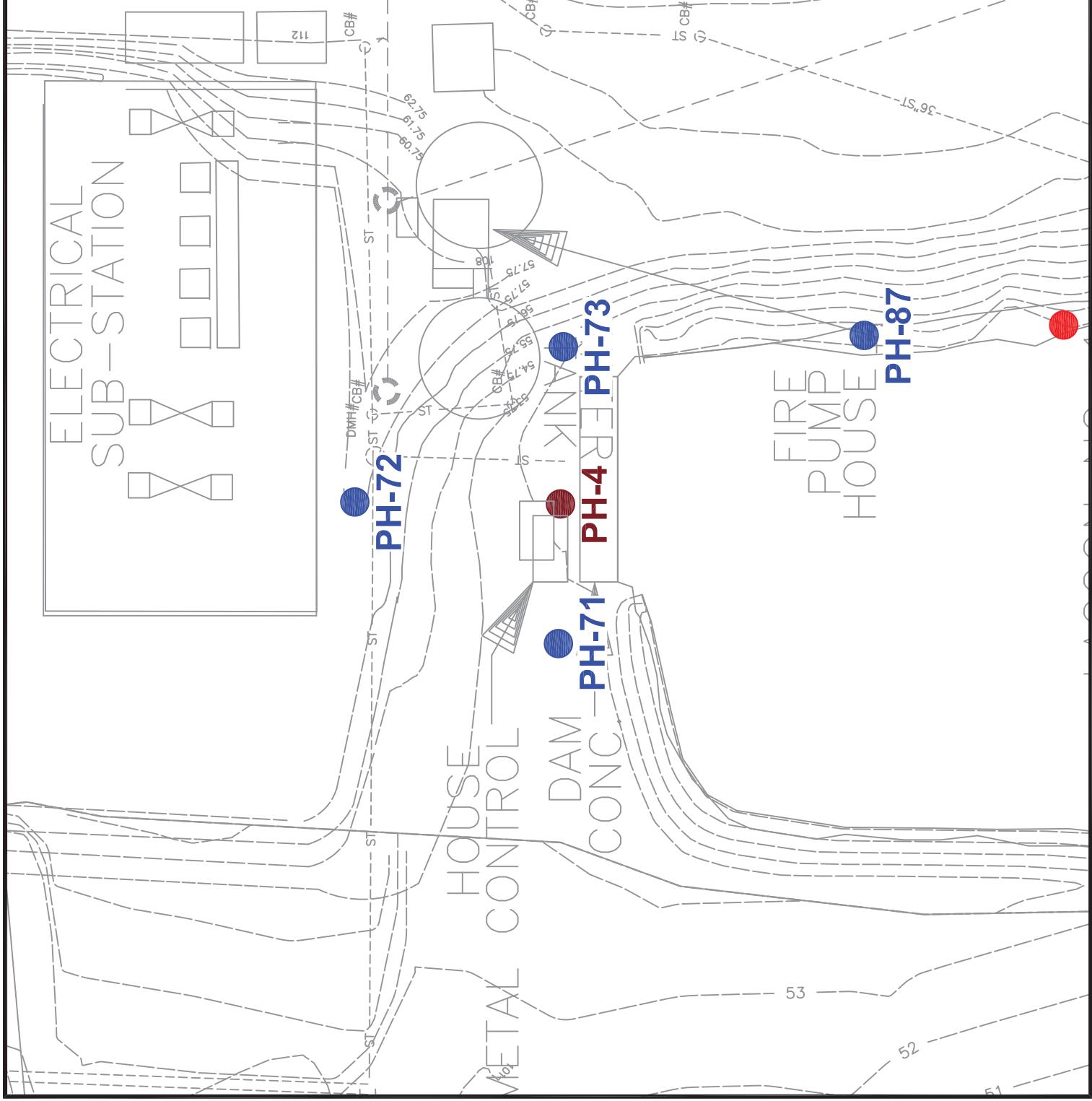


Figure 12. Probehole PH-4 Delineation

Phase II Environmental Site Assessment
Magna/New Process Gear Facility (127± Acres)
6600 New Venture Gear Drive
DeWitt, Onondaga County, New York

TABLES

Table 2

Sample Location	Depth (feet BL\$)	Unrestricted Use Soil Cleanup Objective ³		Restricted Use Soil Cleanup Objective ³		Date	Chrysene (mg/kg)
		Sample	Depth	Sample	Depth		Chrysene (mg/kg)
		Depth	Date	Depth	Date		Chrysene (mg/kg)
Upper Stormwater Pond	1	11/5/12	<0.014	<0.0026	<0.012	<0.0018	<0.011
Upper Stormwater Pond	1	11/5/12	<0.063	<0.012	<0.057	<0.0083	<0.052
Lower Stormwater Pond	0.2-5	11/5/12	<7.700	10,000 J	<6,000	61,000 J	<1,000
PH-3	0-1	12/14/12	<0.012	<0.0024	<0.011	<0.011	<0.0033
PH-87	20	12/14/12	<0.012	<0.0022	<0.010	<0.013	<0.0033
PH-88							<0.0045
PH-4	10.5	11/5/12	<0.012	<0.0023	<0.011	<0.0099	<0.013 J
Underground Storage Tank Area	12	11/5/12	<0.012	<0.0023	<0.011	<0.0016	<0.0099
PH-5	9	11/5/12	<0.012	<0.0022	<0.010	<0.0015	<0.0095
PH-6	9	11/6/12	<0.012	<0.0023	<0.010	<0.0022	<0.0048
PH-7	8.5						<0.0045
East Pad	3	11/6/12	<0.011	<0.0022	<0.010	<0.0015	<0.0046
Wastewater Treatment Plant	7	11/6/12	<0.058	<0.014 J	<0.052	<0.011	<0.0077
PH-9	7	12/13/12	<0.012	<0.0022	<0.010	<0.0015	<0.0095
PH-74	7	12/13/12	<0.011	<0.0022	<0.010	<0.0015	<0.0083
PH-75							<0.0046
PH-76	6	12/13/12	<0.011	<0.0059	<0.021	<0.0015	<0.0031
PH-77	6	12/13/12	<0.012	<0.0023	<0.010	<0.0013	<0.0036
PH-78	4.5	12/13/12	<0.013	<0.0025	<0.011	<0.0022	<0.0017
Stormwater Lines	5.5	11/6/12	<0.012	0.0088 J	<0.010	<0.0015	<0.0086
PH-11	4	11/7/12	<0.013	<0.0025	<0.011	<0.0024	<0.0017
PH-17	4						<0.0017
Background	8	11/6/12	NS	NS	NS	NS	NS
PH-12	10	11/6/12	NS	NS	NS	NS	NS
PH-13	6	11/6/12	NS	NS	NS	NS	NS
PH-14	7.5	11/6/12	NS	NS	NS	NS	NS
PH-15							NS
Railroad Spur	1	11/6/12	<0.062	<0.012	<0.056	<0.012	<0.051
PH-6	5	12/12/12	<0.011	<0.0022	<0.010	<0.0015	<0.0094
PH-62	2.5	12/12/12	<0.059	<0.012	<0.053	<0.011	<0.0078
PH-64	2.5	12/12/12	<0.011	<0.0022	<0.010	<0.0015	<0.0093
PH-66	2.5	12/12/12	NA	NA	NA	NA	NA
PH-68	2.5	12/12/12	<0.012	<0.0022	<0.010	<0.0015	<0.0085
PH-69	2.5	12/12/12	<0.012	<0.0022	<0.010	<0.0015	<0.0082
PH-70	2.5	12/12/12	<0.011	<0.0022	<0.010	<0.0015	<0.0081
Industrial Wastewater Lines	8	11/7/12	<0.012	<0.0068 J	<0.011	<0.0016	<0.0097
PH-62	8	12/11/12	<0.013	<0.0024	<0.011	<0.0016	<0.0074
PH-53	8	12/11/12	<0.013	<0.0024	<0.011	<0.0016	<0.0074
PH-64	8	12/12/12	<0.012	<0.0022	<0.010	<0.0015	<0.0095
PH-55	8	12/12/12	<0.011	<0.0022	<0.010	<0.0015	<0.0093
PH-19	11	11/7/12	0.036 J	<0.0023	<0.011	<0.0016	<0.0088

Table Continued on Next Page

Table 2

		Unrestricted Use Soil Cleanup Objective ³		Restricted Use Soil Cleanup Objective ³				D-n-butyl phthalate (mg/kg)	
		Sample Location	Depth	Date	Sample	Depth	Date	Chrysene (mg/kg)	Chrysene (mg/kg)
Industrial Wastewater Lines, Continued ⁴									
PH-20	4	11/7/12	<0.220	<0.043	<0.200	<0.042	<0.029	<0.180	<0.091
PH-56	3	12/10/12	NA	NA	NA	NA	NA	NA	NA
PH-58	4	12/10/12	NA	NA	NA	NA	NA	NA	NA
PH-59	4	12/10/12	NA	NA	NA	NA	NA	NA	NA
PH-27	12	11/7/12	0.039J	0.230	<0.111	0.045J	<0.016	<0.050	<0.034
PH-28	2	11/8/12	<0.111	<0.0222	<0.10	<0.022	<0.0015	<0.084	<0.047
PH-34	2	12/10/12	NA	NA	NA	NA	NA	NA	NA
PH-35	2	12/10/12	NA	NA	NA	NA	NA	NA	NA
PH-36	2	12/10/12	NA	NA	NA	NA	NA	NA	NA
PH-37	2.5	12/10/12	NA	NA	NA	NA	NA	NA	NA
PH-38	8	12/10/12	NA	NA	NA	NA	NA	NA	NA
PH-29	10	11/8/12	<0.012	<0.0222	<0.010	<0.022	<0.0015	<0.085	<0.047
PH-30	6	11/8/12	<0.012	<0.023	<0.010	<0.022	<0.0015	<0.096	<0.048
Below Slab									
PH-22	6	11/7/12	<0.011	<0.022	<0.010	<0.011	<0.0016	<0.094	<0.047
PH-25	3	11/8/12	<0.110	<0.021	<0.097	<0.020	<0.014	<0.089	<0.044
PH-33	1	11/8/12	<0.110	<0.021	<0.097	<0.020	<0.014	<0.089	<0.042
Coolant Flumes									
PH-29	12	11/7/12	<0.220	<0.043	<0.200	<0.042	<0.029	<0.180	<0.091
PH-39	11.5	12/10/12	<0.063	<0.057	<0.057	<0.022	<0.010	<0.021	<0.010
PH-40	6	12/10/12	<0.011	<0.022	<0.010	<0.022	<0.015	<0.092	<0.046
PH-40	13	12/10/12	<0.011	<0.022	<0.010	<0.022	<0.015	<0.094	<0.047
PH-41	8	12/10/12	0.038J	0.250	<0.111	<0.023	<0.016	<0.099	<0.049
PH-41	12	12/10/12	<0.011	<0.021	<0.010	<0.021	<0.015	<0.082	<0.046
PH-43	11	12/10/12	<0.120	<0.042	<0.100	0.020J	0.014J	0.082J	0.041J
PH-44	6	12/11/12	<0.064	<0.042J	<0.058J	<0.024	<0.013	<0.094	<0.048
PH-47	6	12/11/12	<0.013	<0.039J	<0.011	<0.024	<0.017	<0.052	<0.036
PH-48	13	12/11/12	<0.011	<0.022	<0.009J	<0.021	<0.015	<0.091	<0.045
PH-49	4	12/11/12	<0.014	<0.027	<0.012	<0.026	<0.018	<0.057	<0.031
PH-50	5	12/11/12	<0.011	<0.021	<0.009J	<0.021	<0.014	<0.091	<0.045
PH-51	9	12/11/12	<0.012	<0.023	<0.011	<0.022	<0.015	<0.097	<0.048
PH-31	12	11/8/12	<0.110	<0.021	<0.099	<0.170J	<0.014	<0.091	<0.045

¹ Semi-Volatile Organic Compounds; Testing of the samples was in accordance with Method 8270 outlined in 40 CFR, Part 136.² Milligrams per kilogram³ 6 NYCRR (New York Codes, Rules, and Regulations) Part 375. Restricted use Soil Cleanup Objectives are for industrial usage. Detected concentrations exceeding a SCO are in bold.⁴ Supplemental Soil Cleanup Objective provided in NYSDEC Policy CP-51 Soil Cleanup Guidance.⁵ BL S = Below land surface⁶ J = Result is less than the reporting limit but greater than or equal to the method detection limit and the concentration is an approximate value.

NS = Not Sampled

Table 2

Sample Location (feet BL\$) ²	Depth Date	Unrestricted Use Soil Cleanup Objective ³		Restricted Use Soil Cleanup Objective ³		Phenanthrene (mg/kg)		Pyrene (mg/kg)	
		100 ⁴	0.33	7.1 ⁴	... ⁵	100 ⁴	0.5	... ⁵	100 ⁴
							1,000	1,000	1,000
PH-20	4 1/17/12	<0.083	<0.042	<-0.037	<-0.110	<-0.052	<-0.099	<-0.200	<-0.059
PH-56	3 12/12/12	NA	NA	NA	NA	NA	NA	NA	<-1.200
PH-58	4 12/12/12	NA	NA	NA	NA	NA	NA	NA	<-0.075
PH-59	4 12/12/12	NA	NA	NA	NA	NA	NA	NA	<-0.390
PH-27	12 1/17/12	<-0.046	<0.0023	0.046J	<0.0051	0.120J	0.098J	<0.0054	<-0.11
PH-28	2 1/18/12	<-0.0043	<-0.0022	<-0.0019	<-0.0056	<-0.0048	0.014J	<-0.0042	<-0.010
PH-34	2 12/10/12	NA	NA	NA	NA	NA	NA	NA	<-0.031
PH-35	2 12/10/12	NA	NA	NA	NA	NA	NA	NA	<-0.063
PH-36	2 12/10/12	NA	NA	NA	NA	NA	NA	NA	<-0.039
PH-37	2.5 12/10/12	NA	NA	NA	NA	NA	NA	NA	<-0.039
PH-38	8 12/10/12	NA	NA	NA	NA	NA	NA	NA	<-0.039
PH-29	10 1/18/12	<-0.0043	<-0.0022	<-0.0019	<-0.0056	<-0.0048	<-0.0027	<-0.0043	<-0.0051
PH-30	6 1/18/12	<-0.0043	<-0.0022	<-0.0019	<-0.0056	<-0.0048	<-0.0027	<-0.0043	<-0.0051
<u>Below Slab</u>									
PH-22	6 1/17/12	<-0.0043	<-0.0022	<-0.0019	<-0.0056	<-0.0042	<-0.0027	<-0.0051	<-0.010
PH-25	3 1/17/12	<-0.0045	<-0.0023	<-0.0018	<-0.0058	<-0.0050	0.160J	<-0.0044	<-0.011
PH-33	1 1/18/12	<-0.041	<-0.020	<-0.018	0.740J	<-0.045	<-0.025	<-0.040	<-0.048
<u>Coolant Plumes</u>									
PH-26	12 1/17/12	<-0.083	<-0.042	<-0.037	<-0.110	<-0.051	<-0.082	<-0.098	<-0.190
PH-39	11.5 12/10/12	<-0.024	<-0.0042	<-0.0021	<-0.0019	<-0.0054	<-0.0047	<-0.0026	<-0.028
PH-40	6 12/10/12	<-0.056	<-0.0042	<-0.0021	<-0.0019	<-0.0054	<-0.0047	<-0.0023	<-0.016
PH-40	13 12/10/12	<-0.045	<-0.0022	<-0.0023	0.049J	<-0.0058	<-0.0050	<-0.0042	<-0.0051
PH-41	8 12/10/12	<-0.050	<-0.0045	<-0.0021	<-0.0019	<-0.0054	<-0.0055	<-0.0051	<-0.0053
PH-41	12 12/10/12	<-0.080	<-0.021	<-0.019	<-0.0019	<-0.0054	<-0.0047	<-0.0047	<-0.0049
PH-43	11 12/11/12	<-0.043	<-0.012	<-0.010	<-0.0019	<-0.0048	<-0.0056	<-0.0051	<-0.013J
PH-44	6 12/11/12	<-0.024	<-0.012	<-0.011	<-0.0019	<-0.0047	<-0.0051	<-0.0051	<-0.014J
PH-47	6 12/11/12	<-0.047	<-0.024	<-0.024	<-0.019	<-0.0024	<-0.027	<-0.015	<-0.029
PH-48	13 12/11/12	<-0.061	<-0.024	<-0.023	0.026J	<-0.0053	<-0.0029	<-0.049J	<-0.056
PH-49	4 12/11/12	<-0.046	<-0.021	<-0.021	<-0.0018	<-0.0054	<-0.0046	<-0.0041	<-0.0049
PH-50	5 12/11/12	<-0.041	<-0.022	<-0.020	<-0.0022	<-0.0023	<-0.0026	<-0.0058	<-0.0061
PH-51	9 12/11/12	<-0.044	<-0.022	<-0.020	<-0.0057	<-0.0049	<-0.0027	<-0.0044	<-0.0062
PH-31	12 1/18/12	<0.041	<-0.021	<-0.018	<-0.054	<-0.046	<-0.010J	<-0.010J	<-0.029

¹ Semi-Volatile Organic Compounds; Testing of the samples was in accordance with Method B270 outlined in 40 CFR, Part 136.

² Milligrams per kilogram

³ 6 NYSRCS (New York Codes, Rules, and Regulations) Part 375. Restricted use Soil Cleanup Objectives are for industrial usage. Concentrations and detection limits exceeding a SCO are in bold.

⁴ Supplemental Soil Cleanup Objective provided in NYSDDEC Policy CP-51 Soil Cleanup Guidance.

⁵ BL-S = Below land surface

⁶ J = Result is less than the reporting limit but greater than or equal to the method detection limit and the concentration is an approximate value.

NS = Not Sampled

Table 3

							PARAMETERS ANALYZED					
			Barium		Cadmium	Chromium	Lead	Selenium	Silver	Mercury	TPH-DRO	
Sample Identifier	Sample Depth (ft, BLS) ⁵	Date Collected	Unrestricted Use Soil Objective ³	13	350	2.5	30 ⁴	63	3.9	2	0.18	---
			Restricted Use Soil Objective ³	16	10,000	60	6,800	3,900	6,800	6,800	5.7	---
Concentrations are in milligrams per kilogram												
Upper Stormwater Pond			PH-1	1	11/5/12	4.4	45.6	0.25	7.8	8.6	<0.50	<0.25
			PH-2	1	11/5/12	3.1	57.8	0.14 J ⁶	20.6	6.6	<0.54	<0.27
Lower Stormwater Pond			PH-3	0-2.5	11/5/12	6.0	52.9	1.7	27.1	67.2	<0.56	<0.28
			PH-87	0-1	12/14/12	2.0J	34.6	0.34	8.4	16.6	<0.51	<0.25
			PH-88	20	12/14/12	2.4	47.4	0.10J	5.1	3.9	<0.45	<0.23
PH-4			PH-4	10.5	11/5/12	3.0	49.6	0.10 J	10.4	6.2	<0.50	<0.25
Underground Storage Area			PH-5	12	11/5/12	3.3	51.4	0.077 J	10.3	4.6	<0.43	<0.22
			PH-6	9	11/5/12	4.0	47.1	0.10 J	6.9	3.6	<0.47	<0.24
			PH-7	8.5	11/6/12	4.4	60.9	0.11 J	11.4	5.0	<0.44	<0.22
East Pad			PH-8	3	11/6/12	3.1	39.5	0.080 J	5.9	4.2	<0.47	<0.23
Wastewater Treatment Plant			PH-9	7	11/6/12	2.2	71.7	0.17 J	11.2	10.6	<0.44	<0.22
			PH-74	7	12/13/12	NA	NA	NA	NA	NA	NA	NA
			PH-75	7	12/13/12	NA	NA	NA	NA	NA	NA	NA
			PH-76	6	12/13/12	NA	NA	NA	NA	NA	NA	NA
			PH-77	6	12/13/12	NA	NA	NA	NA	NA	NA	NA
			PH-78	4.5	12/13/12	NA	NA	NA	NA	NA	NA	NA
Stormwater Lines			PH-11	5.5	11/6/12	2.4	13.2	0.098 J	21.5	4.4	<0.44	<0.22
			PH-17	4	11/7/12	21.7	56.7	0.16J	26.7	34.1	<0.52	<0.0026
Background			PH-12	8	11/6/12	4.5	30.2	0.098 J	5.6	4.1	<0.47	<0.24
			PH-13	10	11/6/12	4.2	83.9	0.085 J	13.5	2.9	<0.45	<0.23
			PH-14	6	11/6/12	2.7	27.1	0.31	8.1	5.0	<0.52	<0.26
			PH-15	7.5	11/6/12	13.8	43.3	0.14 J	14.3	32.1	<0.45	0.32 J

Table Continued on Next Page

Table 3

							PARAMETERS ANALYZED									
							Barium		Cadmium	Chromium	Lead	Selenium	Mercury		TPH-DRO	
							13	350	2.5	30 ⁴	63	3.9	2	0.18	5.7	---
Concentrations are in milligrams per kilogram																
Sample Identifier	Sample Depth (ft, BLs) ⁵	Depth Date Collected	Unrestricted Use Soil Objective ³	Restricted Use Soil Cleanup Objective ³	10,000	30 ⁴	60	6,800	3,900	6,800	6,800	2	0.18	5.7	---	
Railroad Spur							Concentrations are in milligrams per kilogram							TPH-DRO		
PH-16	1	11/6/12	3.1	17.7	0.12 J	18.7	11.2	<0.43	<0.21	<0.0090	1600 H	NA	NA	<5.5		
PH-62	5	12/12/12	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1,000		
PH-64	2.5	12/12/12	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	160		
PH-66	2.5	12/12/12	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	470		
PH-68	2.5	12/12/12	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	11J		
PH-69	2.5	12/12/12	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	980		
PH-70	2.5	12/12/12	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
Industrial Wastewater Lines							Concentrations are in milligrams per kilogram							TPH-DRO		
PH-18	8	11/7/12	21.6	23.7	0.15J	25.3	37.0	<0.48	<0.24	0.031	NA	NA	NA	NA	NA	
PH-52	8	12/11/12	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
PH-53	8	12/11/12	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
PH-54	8	12/12/12	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
PH-55	8	12/12/12	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
PH-19	11	11/7/12	2.9	35.6	0.082J	22.0	7.9	<0.47	<0.23	<0.0094	NA	TPH-DRO				
PH-20	4	11/7/12	4.9	184	0.35	7.5	8.8	0.47J	<0.21	0.0091J	3000 H	NA	NA	<5.4		
PH-56	3	12/12/12	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	16J		
PH-58	4	12/12/12	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	6.5J		
PH-59	4	12/12/12	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
PH-27	12	11/7/12	2.7	47.2	0.13J	23.4	2.4	<0.51	<0.26	<0.0089	NA	TPH-DRO				
PH-28	2	11/8/12	6.0	57.8	<0.032	6.1	6.0	0.58J	<0.22	<0.0083	NA	NA	NA	NA		
PH-34	2	12/10/12	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
PH-35	2	12/10/12	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
PH-36	2	12/10/12	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
PH-37	2.5	12/10/12	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
PH-38	8	12/10/12	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
PH-29	10	11/8/12	22.6	31.0	0.21J	16.7	30.3	<0.46	<0.23	0.079	NA	NA	NA	NA		
PH-30	6	11/8/12	5.4	28.5	<0.033	5.1	4.6	<0.45	<0.22	0.022	NA	NA	NA	NA		
Below Slab							Concentrations are in milligrams per kilogram							TPH-DRO		
PH-22	6	11/7/12	2.4	18.7	0.085J	23.8	2.4	<0.43	<0.22	<0.0091	NA	NA	NA	NA		
PH-25	3	11/7/12	6.8	41.5	0.15J	16.4	12.6	<0.45	<0.23	0.015J	NA	NA	NA	NA		
PH-33	1	11/8/12	2.4	267	<0.029	6.6	4.3	0.62J	<0.19	0.018J	NA	NA	NA	NA		

Table Continued on Next Page

Table 3

							PARAMETERS ANALYZED				
							Lead		Selenium	Silver	Mercury
							Cadmium	Chromium			TPH-DRO
Comparison of total RCRA metals ¹ and TPH-DRO ² detected in soil samples to NYSDEC Soil Cleanup Objectives; Phase II ESA; ONX1, LLC; Former Magna/New Process Gear Facility, 6600 New Venture Gear Drive; East Syracuse, New York. TTL Project No. 600212-0244		Arsenic	Barium	Cadmium	Chromium	Lead					
Unrestricted Use Soil Cleanup Objective³	13	350	2.5	30 ⁴	63	3.7					
Restricted Use Soil Cleanup Objective³	16	10,000	60	6,800	3,900	3.9					
Sample Identifier	Sample Depth	Date Collected					Concentrations are in milligrams per kilogram				
Coolant Flumes											
PH-26	12	11/7/12	5.5	54	0.086J	5.2	3.7	<0.44	<0.22	<0.0083	5500 H
PH-39	11.5	12/10/12	NA	NA	NA	NA	NA	NA	NA	NA	3200
PH-40	6	12/10/12	NA	NA	NA	NA	NA	NA	NA	NA	10J
PH-40	13	12/10/12	NA	NA	NA	NA	NA	NA	NA	NA	1600
PH-41	8	12/10/12	NA	NA	NA	NA	NA	NA	NA	NA	NA
PH-41	12	12/10/12	NA	NA	NA	NA	NA	NA	NA	NA	730
PH-43	11	12/10/12	NA	NA	NA	NA	NA	NA	NA	NA	150
PH-44	6	12/11/12	NA	NA	NA	NA	NA	NA	NA	NA	3600
PH-47	6	12/11/12	NA	NA	NA	NA	NA	NA	NA	NA	NA
PH-48	13	12/11/12	NA	NA	NA	NA	NA	NA	NA	NA	3100
PH-49	4	12/11/12	NA	NA	NA	NA	NA	NA	NA	NA	110
PH-50	5	12/11/12	NA	NA	NA	NA	NA	NA	NA	NA	7.6J
PH-51	9	12/11/12	NA	NA	NA	NA	NA	NA	NA	NA	120
PH-31	12	11/8/12	2.0J	51	0.094J	18.6	1.2	<0.46	<0.23	<0.0082	NA

¹ Samples were analyzed for total Resource Conservation and Recovery Act (RCRA) metals, and mercury in general accordance with Methods 6010 and 7471A outlined in "Test Methods for Evaluating Solid Waste Physical/Chemical Methods", EPA, SW-846.

² TPH-DRO = Total petroleum hydrocarbons - diesel range organics. Samples were analyzed for total Resource Conservation and Recovery Act (RCRA) metals, and mercury in general accordance with Methods 6010 and 7471A outlined in "Test Methods for Evaluating Solid Waste Physical/Chemical Methods", EPA, SW-846.

³ 6 NYCRR (New York Codes, Rules, and Regulations) Part 375. Restricted use Soil Cleanup Objectives are for industrial usage. Concentrations and detection limits exceeding a SCO are in bold.

⁴ SCO given is for trivalent chromium.

⁵ Feet, below land surface

⁶ J= Result is less than the reporting limit but greater than or equal to the method detection limit and the concentration is an approximate value. H = sample was analyzed outside of holding time, which could result in a lower value reported.

⁷ H - Samples were analyzed outside of the prescribed holding time, which could result in the reported concentration being lower than actual.

Table 4

Comparison of VOCs ¹ detected in groundwater samples to Water Quality Standards; Phase II E&S; ONX1, LLC; Former Magna/New Process Gear Facility, 6600 New Venture Gear Drive; East Syracuse, New York; TTL Project No. 600212-024										
Industrial Wastewater Lines PH-27 11/7/12										
Under Slab	Water Quality Standard ³		Guidance Value ⁴							
	5	5	3	---	50	50	---	50	5	5
Coolant Flumes	<0.31	<0.38	<0.41	<0.79	<1.2	<1.3	<2.1	<3.0	<0.19	<0.68
PH-26	<0.31	<0.38	0.48J	<0.79	2.2J	8.9J	3.5J	62	3.4	5.3
PH-40	<0.31	<0.38	<0.41	<0.79	<1.2	1.6J	<2.1	5.6J	0.30J	3.6
PH-33	<0.31	<0.38	<0.41	<0.79	<1.2	<1.3	<2.1	<3.0	<0.19	<0.68
Blank	<0.31	<0.38	<0.41	<0.79	<1.2	<1.3	<2.1	<3.0	<0.19	<0.81

¹ Volatile Organic Compounds; Testing of the samples was in accordance with Method 8260 outlined in 40 CFR, Part 136.

² Micrograms per liter

³ WQS = Water Quality Standard as defined in Table 1 (cf. Section 703.5) Water Quality Standards Surface Waters and Groundwater Effluent Limitations

⁴ Guidance Value = Defined in Table 1 of Division of Water Technical and Operational Guidance Series (TOGS) 1.1.1, dated 1998

⁵ J = Result is less than the reporting limit but greater than or equal to the method detection limit and the concentration is an approximate value.

Concentrations exceeding a WQS or Guidance Value are in bold.

Table 5

Probe-hole Identifier	Date Sampled	Water Quality Standard ³			Water Quality Standard ⁴			Phenanthrene (ug/L)			Pyrene (ug/L)		
		5	20	50	ND	0.002	0.002	5	0.002	50	50	0.002	50
Upper Stormwater Pond													
PH-1	11/5/12	<0.57	<0.24	<0.39	0.42J ⁵	0.55J	4.3J	5.3	7.3	1.7J	<0.70	11	<2.1
PH-2	11/5/12	<0.57	<0.24	<0.39	<0.36	<0.26	1.1J	1.4J	1.8J	0.56J	<0.69	8.5	<2.1
PH-83	12/14/12	<0.62	12	<0.42	<0.39	<0.29	<0.37	<0.48	<0.35	<0.36	<0.75	<1.9	<2.3
PH-84	12/14/12	<0.74	<0.31	<0.50	<0.47	<0.34	<0.44	<0.58	<0.42	<0.43	<0.90	2.5J	<2.7
PH-85	12/14/12	<0.59	<0.25	<0.40	<0.37	<0.28	<0.36	<0.46	<0.34	<0.35	<0.72	<1.8	<2.2
Lower Stormwater Pond													
PH-3	11/5/12	6.7J	<2.4	42J	<3.6	52	250	260	380	67	150	110	49
PH-87	12/14/12	<0.81	<0.34	<0.56	<0.51	<0.38	<0.49	<0.64	<0.46	<0.47	<0.99	3.7J	<3.0
PH-88	12/14/12	<1.1	<0.46	<0.76	<0.70	<0.52	<0.67	<0.87	<0.63	<0.65	<1.3	<3.3	<4.1
Underground Storage Tank Area													
PH-4	11/5/12	<0.57	<0.24	<0.39	<0.36	<0.26	0.52J	0.52J	0.70J	<0.33	<0.69	<1.7	<2.1
PH-71	12/13/12	<0.71	<0.30	<0.48	<0.45	<0.33	<0.42	<0.55	<0.40	<0.41	<0.86	5.2J	<2.6
PH-72	12/13/12	<0.82	<0.34	<0.56	<0.52	<0.38	<0.49	<0.64	<0.46	<0.48	<0.99	<2.4	<3.0
PH-73	12/13/12	<0.71	<0.29	<0.48	<0.45	<0.33	<0.42	<0.55	<0.40	<0.41	<0.86	<2.1	<2.6
Railroad Spur													
PH-16	11/8/12	<12	<5.0	<8.3	<7.7	<5.6	<7.3	<9.5	<6.9	<7.1	<15	<36	<44
Stormwater Lines													
PH-17	11/7/12	<0.58	<0.24	<0.40	<0.37	<0.27	<0.35	<0.46	<0.33	<0.34	<0.71	<1.8	<2.1
Table Continued on Next Page													

Comparison of SVOCs¹ detected in groundwater samples to Water Quality Standards; Phase II E&S; ONX1, LLC; Former Magna/New Process Gear Facility; 6600 New Venture Gear Drive; East Syracuse, New York; TTL Project No. 600212-024

		Water Quality Standard ³										Guidance Value ⁴										
		5	20	50	0.002	ND	0.002	5	---	---	0.002	50	50	0.002	50	50	50	50	50	50	50	
Wastewater Treatment Lines																						
PH-27	11/7/12	<0.67	<0.28	<0.46	<0.43	<0.31	<0.40	<0.53	<0.38	<0.39	<0.82	<2.0	<2.5	<0.34	<0.37	<0.53	<0.47	<0.57	<0.45	<0.40	<0.53	
Under Slab																						
PH-31	11/8/12	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Coolant Flumes																						
PH-26	11/7/12	<780	<300	<490	<460	<340	<430	<560	<410	<420	<380	8300	<2600	<360	<400	<560	<610	<480	<430	<560	<530	<410
PH-40	12/10/12	<14	<5.9	<9.6	<8.9	<6.6	<8.5	<11	<8.0	<8.2	<17	110J	<52	<7.1	<7.8	<11	<9.9	<12	<9.4	<8.5	<11	<10
PH-33	11/8/12	<0.61	<0.25	<0.41	<0.38	<0.28	<0.36	<0.47	<0.34	<0.35	<0.74	<1.8	<2.2	<0.30	<0.33	<0.47	<0.42	<0.51	<0.40	<0.36	<0.47	<0.44

¹ Semi-Volatile Organic Compounds; Testing of the samples was in accordance with Method 8270 outlined in 40 CFR, Part 136.

² ug/L = Micrograms per liter

³ WQS = Water Quality Standard as defined in Table 1 (cf. Section 703.5) Water Quality Standards Surface Waters and Groundwater: Surface Water and Groundwater Quality Standards and Groundwater Effluent Limitations

⁴ Guidance Value = Defined in Table 1 of Division of Water Technical and Operational Guidance Series (TOGS) 1.1.1, dated 1998

⁵ J = Result is less than the reporting limit but greater than or equal to the method detection limit and the concentration is an approximate

NA = Not analyzed for this constituent

Concentrations exceeding a WQS are in bold.

APPENDICES

APPENDIX A
SOIL BORING LOGS



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ONX1, LLC
FORMER MAGNA/NEW PROCESS
GEAR FACILITY

LOG OF PROBE HOLE
PH-34

PROJECT NUMBER		PROFESSIONAL	S. McDonald
LOCATION	Syracuse, New York	DATE(S) DRILLED	12/10/2012
DRILLING COMPANY	Zebra	GROUND ELEVATION	
DRILLER	Nick Loncto	DEPTH TO WATER	
DRILLING METHOD	Geoprobe	WATER ELEVATION	
REMARKS	20' east of PH-28		

DEPTH (feet)	GRAPHIC LOG	U.S.C.S.	SAMPLE			LITHOLOGIC DESCRIPTION	WATER LEVEL & DATE	REMARKS
			INTERVAL (feet)	% RECOVERY	PID (ppm)			
0 - 4	GM		0 - 4	100		CONCRETE GRAVELLY SILT, brown (7.5YR 4/3) GRAVELLY, CLAYEY SILT, mottled brown (7.5YR 5/3) and gray (2.5Y 5/1)		PROBEHOLE TERMINATED AT 4 FEET.



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LOG OF PROBE HOLE
PH-35

PROJECT NUMBER		PROFESSIONAL	S. McDonald
LOCATION	Syracuse, New York	DATE(S) DRILLED	12/10/2012
DRILLING COMPANY	Zebra	GROUND ELEVATION	
DRILLER	Nick Loncto	DEPTH TO WATER	
DRILLING METHOD	Geoprobe	WATER ELEVATION	
REMARKS	22' south of PH-28		

DEPTH (feet)	GRAPHIC LOG	U.S.C.S.	SAMPLE			LITHOLOGIC DESCRIPTION	WATER LEVEL & DATE	REMARKS
			INTERVAL (feet)	% RECOVERY	PID (ppm)			
0 - 4	GM		100			CONCRETE GRAVELLY SILT, gray (7.5YR 5/1), hard		
						SILT, mottled weak red (10R 4/4) and light yellowish brown (2.5Y 6/3), hard		
PROBEHOLE TERMINATED AT 4 FEET.								



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LOG OF PROBE HOLE
PH-36

PROJECT NUMBER		PROFESSIONAL	S. McDonald
LOCATION	Syracuse, New York	DATE(S) DRILLED	12/10/2012
DRILLING COMPANY	Zebra	GROUND ELEVATION	
DRILLER	Nick Loncto	DEPTH TO WATER	
DRILLING METHOD	Geoprobe	WATER ELEVATION	
REMARKS	18' west of PH-28		

DEPTH (feet)	GRAPHIC LOG	U.S.C.S.	SAMPLE			LITHOLOGIC DESCRIPTION	WATER LEVEL & DATE	REMARKS
			INTERVAL (feet)	% RECOVERY	PID (ppm)			
0 - 4	ML	ML	0 - 4	100		CONCRETE SANDY SILT, FILL, brown (7.5YR 5/4) SILT, mottled light olive gray (5Y 6/2) and weak red (10R 5/3), hard SILT, yellowish brown (10YR 5/6), soft		PROBEHOLE TERMINATED AT 4 FEET.



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LOG OF PROBE HOLE
PH-37

PROJECT NUMBER		PROFESSIONAL	S. McDonald
LOCATION	Syracuse, New York	DATE(S) DRILLED	12/10/2012
DRILLING COMPANY	Zebra	GROUND ELEVATION	
DRILLER	Nick Loncto	DEPTH TO WATER	
DRILLING METHOD	Geoprobe	WATER ELEVATION	
REMARKS	30' north of PH-28		

DEPTH (feet)	GRAPHIC LOG	U.S.C.S.	SAMPLE			LITHOLOGIC DESCRIPTION	WATER LEVEL & DATE	REMARKS
			INTERVAL (feet)	% RECOVERY	PID (ppm)			
0 - 4	GM		75			CONCRETE GRAVELLY SILT, brown (7.5YR 4/2)		
						SILTY CLAY, weak red (2.5YR 5/2), plastic		
PROBEHOLE TERMINATED AT 4 FEET.								



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LOG OF PROBE HOLE
PH-38

PROJECT NUMBER		PROFESSIONAL	S. McDonald
LOCATION	Syracuse, New York	DATE(S) DRILLED	12/10/2012
DRILLING COMPANY	Zebra	GROUND ELEVATION	
DRILLER	Nick Loncto	DEPTH TO WATER	
DRILLING METHOD	Geoprobe	WATER ELEVATION	
REMARKS	Adjacent to PH-28 for vertical delineation		

DEPTH (feet)	GRAPHIC LOG	U.S.C.S.	SAMPLE			LITHOLOGIC DESCRIPTION	WATER LEVEL & DATE	REMARKS
			INTERVAL (feet)	% RECOVERY	PID (ppm)			
0 - 4	GM		0 - 4	88		CONCRETE GRAVELLY SILT, reddish brown (2.5YR 5/3)		
4 - 8	ML		4 - 8	75		SILT, brown (7.5YR 5/4), soft		
5	GM					GRAVELLY SILT lens SILT, brown (7.5YR 5/4), soft		
						PROBEHOLE TERMINATED AT 8 FEET.		



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LOG OF PROBE HOLE
PH-39

PROJECT NUMBER		PROFESSIONAL	S. McDonald
LOCATION	Syracuse, New York	DATE(S) DRILLED	12/10/2012
DRILLING COMPANY	Zebra	GROUND ELEVATION	
DRILLER	Nick Loncto	DEPTH TO WATER	
DRILLING METHOD	Geoprobe	WATER ELEVATION	
REMARKS	25' east of PH-26 (near flume pit 8/9)		

DEPTH (feet)	GRAPHIC LOG	U.S.C.S.	SAMPLE			LITHOLOGIC DESCRIPTION	WATER LEVEL & DATE	REMARKS
			INTERVAL (feet)	% RECOVERY	PID (ppm)			
GM		5	0 - 4	75		CONCRETE SILTY, GRAVELLY SAPROLITE, olive (5Y 4/3)		
			4 - 8	50		GRAVELLY SILT, brown (7.5YR 5/4)		
			8 - 12	100		----shale fragments; sandy, gravelly silt----		
			12 - 16	75		----strong hydrocarbon odor----		
			16 - 20	50		----moist----		
						SILTY GRAVEL, black (5Y 2.5/1), with oily sheen and strong hydrocarbon odor, SATURATED		
						PROBEHOLE TERMINATED AT 20 FEET.		

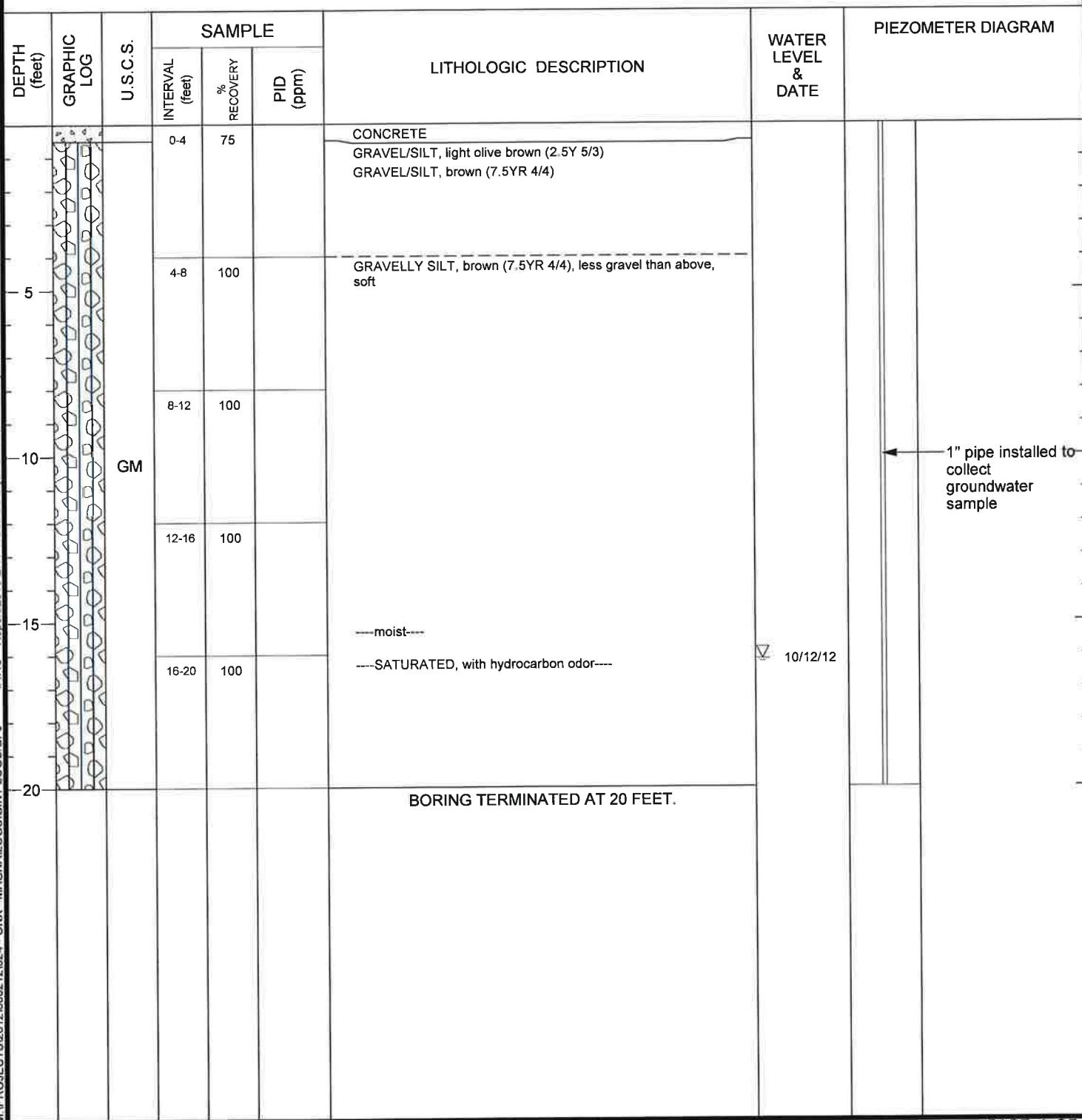


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GEAR FACILITY

LOG OF PROBEHOLE
PH-40
& PIEZOMETER
CONSTRUCTION

PROJECT NUMBER		PROFESSIONAL	S. McDonald
LOCATION	Syracuse, New York	DATE(S) DRILLED	12/10/2012
DRILLING COMPANY	Zebra	CASING DIA./TYPE	2" PVC
DRILLER	Nick Loncto	SCREEN SLOT/TYPe	0.010-in. slotted PVC
DRILLING METHOD	Geoprobe	FILTER PACK TYPE	
REMARKS	20' west of PH-26	TOP OF CASING	
		GROUND ELEVATION	
		DEPTH TO WATER	16.00 Ft. BLS
		WATER ELEVATION	





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GEAR FACILITY

LOG OF PROBE HOLE
PH-41

PROJECT NUMBER		PROFESSIONAL	S. McDonald
LOCATION	Syracuse, New York	DATE(S) DRILLED	12/10/2012
DRILLING COMPANY	Zebra	GROUND ELEVATION	
DRILLER	Nick Loncto	DEPTH TO WATER	
DRILLING METHOD	Geoprobe	WATER ELEVATION	
REMARKS	25' south of PH-26 (near flume pit 8/9)		

DEPTH (feet)	GRAPHIC LOG	U.S.C.S.	SAMPLE			LITHOLOGIC DESCRIPTION	WATER LEVEL & DATE	REMARKS
			INTERVAL (feet)	% RECOVERY	PID (ppm)			
0 - 4			0 - 4	75		CONCRETE GRAVELLY SILT, light olive brown (2.5Y 5/3)		
4 - 8	GM		4 - 8	100		GRAVELLY SILT, reddish brown (5YR 4/3) SILT, mottled weak red (10R 4/3) and pale olive (5Y 6/3), hard		
8 - 12	GM		8 - 12	100		SILT and SILTSTONE, light gray (5Y 7/2), broken up by geoprobe		
						PROBE REFUSAL AT 12 FEET.		



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LOG OF PROBE HOLE
PH-42

PROJECT NUMBER		PROFESSIONAL	S. McDonald
LOCATION	Syracuse, New York	DATE(S) DRILLED	12/10/2012
DRILLING COMPANY	Zebra	GROUND ELEVATION	
DRILLER	Nick Loncto	DEPTH TO WATER	
DRILLING METHOD	Geoprobe	WATER ELEVATION	
REMARKS	25' east of PH-39 (near flume pit 8/9)		

DEPTH (feet)	GRAPHIC LOG	U.S.C.S.	SAMPLE			LITHOLOGIC DESCRIPTION	WATER LEVEL & DATE	REMARKS
			INTERVAL (feet)	% RECOVERY	PID (ppm)			
0 - 4	GM	ML	0 - 4	100		CONCRETE GRAVELLY SILT, pale olive (5Y 6/3), hard SILT, reddish brown (2.5YR 4/4), hard		
4 - 8	GM		4 - 8	100		GRAVELLY, CLAYEY SILT, mottled light olive brown (2.5Y 5/3) and gray (2.5Y 6/1), moderately competent and hard to drill		
8 - 10	GM		8 - 10	100		SILTSTONE, light gray (2.5Y 7/1)		
10						PROBE REFUSAL AT 10 FEET.		



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LOG OF PROBE HOLE
PH-43

PROJECT NUMBER		PROFESSIONAL	S. McDonald
LOCATION	Syracuse, New York	DATE(S) DRILLED	12/10/2012
DRILLING COMPANY	Zebra	GROUND ELEVATION	
DRILLER	Nick Loncto	DEPTH TO WATER	
DRILLING METHOD	Geoprobe	WATER ELEVATION	
REMARKS	5' east and 30' north of PH-39 (near flume pit 8/9)		

DEPTH (feet)	GRAPHIC LOG	U.S.C.S.	SAMPLE			LITHOLOGIC DESCRIPTION	WATER LEVEL & DATE	REMARKS
			INTERVAL (feet)	% RECOVERY	PID (ppm)			
0 - 4	GM	25	CONCRETE GRAVELLY SILT, strong brown (7.5YR 4/6), with 3" shale fragments					
4 - 12								
5								
8 - 12			GRAVELLY SILT, mottled light olive brown (5Y 6/2) and dark yellowish brown (10YR 4/4), with slight hydrocarbon odor					
10								
12 - 16			----moist----					
15			GRAVEL/SILT mixture, black, SATURATED, with strong oily sheen and odor					
16 - 20								
20 - 22		100						Attempted to collect groundwater sample; however, fluid was too viscous to sample using geoprobe.
			PROBEHOLE TERMINATED AT 22 FEET.					



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GEAR FACILITY

LOG OF PROBE HOLE
PH-44

PROJECT NUMBER		PROFESSIONAL	S. McDonald
LOCATION	Syracuse, New York	DATE(S) DRILLED	12/11/2012
DRILLING COMPANY	Zebra	GROUND ELEVATION	
DRILLER	Nick Loncto	DEPTH TO WATER	
DRILLING METHOD	Geoprobe	WATER ELEVATION	
REMARKS	15' east of PH-43 (near flume pit 8/9)		

DEPTH (feet)	GRAPHIC LOG	U.S.C.S.	SAMPLE			LITHOLOGIC DESCRIPTION	WATER LEVEL & DATE	REMARKS
			INTERVAL (feet)	% RECOVERY	PID (ppm)			
0 - 4	SP		0 - 4	75		CONCRETE GRAVELLY SAND/FILL, dark grayish brown (10YR 4/2)		
4 - 8	ML		4 - 8	88		6" layer of old BRICK CLAYEY SILT, stained black, with oily sheen and hydrocarbon odor, moist CLAYEY SILT, mottled gray (5Y 5/1) and olive yellow (2.5Y 6/8)		
PROBEHOLE TERMINATED AT 8 FEET.								



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LOG OF PROBE HOLE
PH-45

PROJECT NUMBER		PROFESSIONAL	S. McDonald
LOCATION	Syracuse, New York	DATE(S) DRILLED	12/11/2012
DRILLING COMPANY	Zebra	GROUND ELEVATION	
DRILLER	Nick Loncto	DEPTH TO WATER	
DRILLING METHOD	Geoprobe	WATER ELEVATION	
REMARKS	25' east of PH-44 (near flume pit 8/9)		

DEPTH (feet)	GRAPHIC LOG	U.S.C.S.	SAMPLE			LITHOLOGIC DESCRIPTION	WATER LEVEL & DATE	REMARKS
			INTERVAL (feet)	% RECOVERY	PID (ppm)			
0 - 4	GP		0 - 4	75		CONCRETE GRAVELLY, CLAYEY SILT, light olive brown (2.5Y 5/3)		
4 - 8	ML		4 - 8	75		6" layer of old BRICK 6" of SILT with oily sheen and hydrocarbon odor SILT, grayish brown (2/5Y 5/2), hard, with hydrocarbon odor but no sheen		
						PROBE REFUSAL AT 8 FEET.		



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LOG OF PROBE HOLE
PH-46

PROJECT NUMBER		PROFESSIONAL	S. McDonald
LOCATION	Syracuse, New York	DATE(S) DRILLED	12/11/2012
DRILLING COMPANY	Zebra	GROUND ELEVATION	
DRILLER	Nick Loncto	DEPTH TO WATER	
DRILLING METHOD	Geoprobe	WATER ELEVATION	
REMARKS	At northeast corner of flume pit 8/9		

DEPTH (feet)	GRAPHIC LOG	U.S.C.S.	SAMPLE			LITHOLOGIC DESCRIPTION	WATER LEVEL & DATE	REMARKS
			INTERVAL (feet)	% RECOVERY	PID (ppm)			
0 - 4		GM	0 - 4	38		WOOD COMPOSITE BLOCKS over CONCRETE GRAVELLY SILT, gray (10YR 5/1), with 2" quartzite fragments		
4 - 8			4 - 8	63		-----with black oily sheen and hydrocarbon odor----- GRAVELLY, CLAYEY SILT, brown (7.5YR 4/3), with hydrocarbon odor		PROBEHOLE TERMINATED AT 8 FEET.



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LOG OF PROBE HOLE
PH-47

PROJECT NUMBER		PROFESSIONAL	S. McDonald
LOCATION	Syracuse, New York	DATE(S) DRILLED	12/11/2012
DRILLING COMPANY	Zebra	GROUND ELEVATION	
DRILLER	Nick Loncto	DEPTH TO WATER	
DRILLING METHOD	Geoprobe	WATER ELEVATION	
REMARKS	50' north of probehole PH-46		

DEPTH (feet)	GRAPHIC LOG	U.S.C.S.	SAMPLE			LITHOLOGIC DESCRIPTION	WATER LEVEL & DATE	REMARKS
			INTERVAL (feet)	% RECOVERY	PID (ppm)			
0 - 4	GM		0 - 4	75		WOOD COMPOSITE BLOCKS over CONCRETE GRAVELLY SILT, grayish brown (2.5Y 5/2) SILT, weak red (10R 4/4), partially competent		
5	CL		4 - 8	100		SILTY CLAY, weak red (10R 4/4)		
		ML	8 - 10	100		SILT, light olive gray (5Y 6/2), hard (partially competent siltstone)		
10						PROBE REFUSAL AT 10 FEET.		



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LOG OF PROBE HOLE
PH-48

PROJECT NUMBER		PROFESSIONAL	S. McDonald
LOCATION	Syracuse, New York	DATE(S) DRILLED	12/11/2012
DRILLING COMPANY	Zebra	GROUND ELEVATION	
DRILLER	Nick Loncto	DEPTH TO WATER	
DRILLING METHOD	Geoprobe	WATER ELEVATION	
REMARKS	North side of flume pit 8/9		

DEPTH (feet)	GRAPHIC LOG	U.S.C.S.	SAMPLE			LITHOLOGIC DESCRIPTION	WATER LEVEL & DATE	REMARKS
			INTERVAL (feet)	% RECOVERY	PID (ppm)			
GM			0 - 4	63		CONCRETE GRAVELLY SILT, yellowish brown (10YR 5/4), with 3" shale fragments		Attempted to collect groundwater sample; however, fluid was too viscous to sample using geoprobe.
			4 - 8	75		GRAVELLY SILT, brown (7.5YR 4/3), with shale		
			8 - 12	88		----with hydrocarbon odor----		
			12 - 16	75		GRAVELLY SILT, reddish brown (2.5YR 4/3), with petroleum odor ----moist----		
			16 - 19	100		----SATURATED----		
						SILT/SILTSTONE, very dark gray (10YR 3/1), hard PROBE REFUSAL AT 19 FEET.		



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LOG OF PROBE HOLE
PH-49

PROJECT NUMBER		PROFESSIONAL	S. McDonald
LOCATION	Syracuse, New York	DATE(S) DRILLED	12/11/2012
DRILLING COMPANY	Zebra	GROUND ELEVATION	
DRILLER	Nick Loncto	DEPTH TO WATER	
DRILLING METHOD	Geoprobe	WATER ELEVATION	
REMARKS	70' east of line between probeholes PH-43 and PH-46		

DEPTH (feet)	GRAPHIC LOG	U.S.C.S.	SAMPLE			LITHOLOGIC DESCRIPTION	WATER LEVEL & DATE	REMARKS
			INTERVAL (feet)	% RECOVERY	PID (ppm)			
0 - 4	GP	ML	88			CONCRETE GRAVELLY FILL CLAYEY SILT, gray (5Y 5/1) to light olive brown (2.5Y 5/4)		PROBE REFUSAL AT 4 FEET.



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LOG OF PROBE HOLE
PH-50

PROJECT NUMBER		PROFESSIONAL	S. McDonald
LOCATION	Syracuse, New York	DATE(S) DRILLED	12/11/2012
DRILLING COMPANY	Zebra	GROUND ELEVATION	
DRILLER	Nick Loncto	DEPTH TO WATER	
DRILLING METHOD	Geoprobe	WATER ELEVATION	
REMARKS	West side of flume pit 8/9, near northwest corner		

DEPTH (feet)	GRAPHIC LOG	U.S.C.S.	SAMPLE			LITHOLOGIC DESCRIPTION	WATER LEVEL & DATE	REMARKS
			INTERVAL (feet)	% RECOVERY	PID (ppm)			
0 - 4	ML	50				WOOD COMPOSITE BLOCKS over CONCRETE		
4 - 6		100				SILT, dark grayish brown (10YR 4/2)		
PROBE REFUSAL AT 6 FEET.								



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LOG OF PROBE HOLE
PH-51

PROJECT NUMBER		PROFESSIONAL	S. McDonald
LOCATION	Syracuse, New York	DATE(S) DRILLED	12/11/2012
DRILLING COMPANY	Zebra	GROUND ELEVATION	
DRILLER	Nick Loncto	DEPTH TO WATER	
DRILLING METHOD	Geoprobe	WATER ELEVATION	
REMARKS	60' north of flume pit 8/9		

DEPTH (feet)	GRAPHIC LOG	U.S.C.S.	SAMPLE			LITHOLOGIC DESCRIPTION	WATER LEVEL & DATE	REMARKS
			INTERVAL (feet)	% RECOVERY	PID (ppm)			
0 - 5	GM	100	0 - 4	100		CONCRETE GRAVELLY SILT, weak red (10R 5/2), hard		
			4 - 8	100		GRAVELLY SILT, grayish brown (2.5Y 5/2)		
	ML	100	8 - 11	100		CLAYEY SILT, light yellowish brown (2.5Y 6/4), with hydrocarbon odor		
						SILT, mottled grayish brown (2.5Y 5/2) and gray (2.5Y 5/1), partially competent		
						PROBE REFUSAL AT 11 FEET.		



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LOG OF PROBE HOLE
PH-52

PROJECT NUMBER		PROFESSIONAL	S. McDonald
LOCATION	Syracuse, New York	DATE(S) DRILLED	12/11/2012
DRILLING COMPANY	Zebra	GROUND ELEVATION	
DRILLER	Nick Loncto	DEPTH TO WATER	
DRILLING METHOD	Geoprobe	WATER ELEVATION	
REMARKS	20' east of PH-18, in battery room		

DEPTH (feet)	GRAPHIC LOG	U.S.C.S.	SAMPLE			LITHOLOGIC DESCRIPTION	WATER LEVEL & DATE	REMARKS
			INTERVAL (feet)	% RECOVERY	PID (ppm)			
5	ML		0 - 4	100		CONCRETE SILT, reddish brown (2.5YR 4/4), with some gravel		
			4 - 8	100		CLAYEY SILT, dark gray (10YR 4/1), hard		
			8 - 10	100		CLAYEY SILT, light olive brown (2.5Y 5/3)		
						SILT, gray (5Y 5/1) and olive gray (5Y 5/2), hard		
PROBE REFUSAL AT 10 FEET.								



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LOG OF PROBE HOLE
PH-53

PROJECT NUMBER		PROFESSIONAL	S. McDonald
LOCATION	Syracuse, New York	DATE(S) DRILLED	12/11/2012
DRILLING COMPANY	Zebra	GROUND ELEVATION	
DRILLER	Nick Loncto	DEPTH TO WATER	
DRILLING METHOD	Geoprobe	WATER ELEVATION	
REMARKS	20' north of PH-18, in battery room		

DEPTH (feet)	GRAPHIC LOG	U.S.C.S.	SAMPLE			LITHOLOGIC DESCRIPTION	WATER LEVEL & DATE	REMARKS
			INTERVAL (feet)	% RECOVERY	PID (ppm)			
ML		5	0 - 4	63		CONCRETE SHALE, weathered, and SILT, reddish brown (5YR 4/4) SILT, very dark gray (5YR 3/1), with shale fragments		
			4 - 8	100		SILT/SHALE, light olive brown (2.5Y 5/3) and gray (2.5Y 5/1), with clayey lenses		
			8 - 11.5	100		SILT/SHALE, pale olive (5Y 6/4) and olive gray (5Y 5/2), weathered		
PROBE REFUSAL AT 11.5 FEET.								



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LOG OF PROBE HOLE
PH-54

PROJECT NUMBER		PROFESSIONAL	S. McDonald
LOCATION	Syracuse, New York	DATE(S) DRILLED	12/12/2012
DRILLING COMPANY	Zebra	GROUND ELEVATION	
DRILLER	Nick Loncto	DEPTH TO WATER	
DRILLING METHOD	Geoprobe	WATER ELEVATION	
REMARKS	20' west of PH-18, outside battery room		

DEPTH (feet)	GRAPHIC LOG	U.S.C.S.	SAMPLE			LITHOLOGIC DESCRIPTION	WATER LEVEL & DATE	REMARKS
			INTERVAL (feet)	% RECOVERY	PID (ppm)			
0 - 4	GM		0 - 4	75		CONCRETE GRAVELLY SILT, reddish brown (5YR 4/4), becoming clayey with depth		
4 - 8	ML		4 - 8	100		CLAYEY SILT, mottled light yellowish brown (2.5Y 6/4) and gray (2.5Y 6/1)		
8 - 11	ML		8 - 11	100		SILTSTONE, light brownish gray (2.5Y 6/2), weathered		
						SILT/SILTSTONE, olive gray (5Y 5/2)		
						PROBE REFUSAL AT 11 FEET.		



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LOG OF PROBE HOLE
PH-55

PROJECT NUMBER		PROFESSIONAL	S. McDonald
LOCATION	Syracuse, New York	DATE(S) DRILLED	12/12/2012
DRILLING COMPANY	Zebra	GROUND ELEVATION	
DRILLER	Nick Loncto	DEPTH TO WATER	
DRILLING METHOD	Geoprobe	WATER ELEVATION	
REMARKS	25' south of PH-18, outside battery room		

DEPTH (feet)	GRAPHIC LOG	U.S.C.S.	SAMPLE			LITHOLOGIC DESCRIPTION	WATER LEVEL & DATE	REMARKS
			INTERVAL (feet)	% RECOVERY	PID (ppm)			
0 - 4	GM		0 - 4	75		CONCRETE FILL, GRAVELLY SILT, dark gray (7.5YR 4/1) GRAVELLY SILT, reddish brown (5YR 4/4)		
4 - 8	GM		4 - 8	100		SILT/SILTSTONE, mottled grayish brown (2.5Y 5/2) and olive yellow (2.5Y 6/6), weathered		
8 - 10	ML		8 - 10	100				
10						PROBE REFUSAL AT 10 FEET.		



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LOG OF PROBE HOLE
PH-56

PROJECT NUMBER		PROFESSIONAL	S. McDonald
LOCATION	Syracuse, New York	DATE(S) DRILLED	12/12/2012
DRILLING COMPANY	Zebra	GROUND ELEVATION	
DRILLER	E. Plank	DEPTH TO WATER	
DRILLING METHOD	Geoprobe	WATER ELEVATION	
REMARKS	22' north of PH-20 (near industrial sewer at KK36)		

DEPTH (feet)	GRAPHIC LOG	U.S.C.S.	SAMPLE			LITHOLOGIC DESCRIPTION	WATER LEVEL & DATE	REMARKS
			INTERVAL (feet)	% RECOVERY	PID (ppm)			
0 - 3.5	GM		0 - 3.5	100		CONCRETE GRAVELLY SILT, brown (7.5YR 4/4), hard, with SILTSTONE/SHALE		PROBE REFUSAL AT 3.5 FEET.



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LOG OF PROBE HOLE
PH-57

PROJECT NUMBER		PROFESSIONAL	S. McDonald
LOCATION	Syracuse, New York	DATE(S) DRILLED	12/12/2012
DRILLING COMPANY	Zebra	GROUND ELEVATION	
DRILLER	Nick Loncto	DEPTH TO WATER	
DRILLING METHOD	Geoprobe	WATER ELEVATION	
REMARKS	25' south of probehole PH-20 (near industrial sewer at KK36)		

DEPTH (feet)	GRAPHIC LOG	U.S.C.S.	SAMPLE			LITHOLOGIC DESCRIPTION	WATER LEVEL & DATE	REMARKS
			INTERVAL (feet)	% RECOVERY	PID (ppm)			
0 - 0.8			0	0		CONCRETE No recovery; refusal at possible footer for building		PROBE REFUSAL AT 0.8 FEET.



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LOG OF PROBE HOLE
PH-58

PROJECT NUMBER		PROFESSIONAL	S. McDonald
LOCATION	Syracuse, New York	DATE(S) DRILLED	12/12/2012
DRILLING COMPANY	Zebra	GROUND ELEVATION	
DRILLER	Nick Loncto	DEPTH TO WATER	
DRILLING METHOD	Geoprobe	WATER ELEVATION	
REMARKS	15' west of PH-20 (near industrial sewer at KK36)		

DEPTH (feet)	GRAPHIC LOG	U.S.C.S.	SAMPLE			LITHOLOGIC DESCRIPTION	WATER LEVEL & DATE	REMARKS
			INTERVAL (feet)	% RECOVERY	PID (ppm)			
			0 - 4	50		CONCRETE FILL, GRAVELLY SAND, very dark grayish brown (10YR 3/2)		
		GP				SHALE, light brownish gray (2.5Y 6/2), weathered		
		ML	4 - 8	75		CLAYEY SILT, light brownish gray (2.5Y 6/2), to light olive brown (2.5Y 5/3) CLAY		
5		ML				SHALE, light gray (5Y 7/2), weathered		
			8 - 9	100		PROBE REFUSAL AT 9 FEET.		

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LOG OF PROBE HOLE
PH-59

PROJECT NUMBER		PROFESSIONAL	S. McDonald
LOCATION	Syracuse, New York	DATE(S) DRILLED	12/12/2012
DRILLING COMPANY	Zebra	GROUND ELEVATION	
DRILLER	Nick Loncto	DEPTH TO WATER	
DRILLING METHOD	Geoprobe	WATER ELEVATION	
REMARKS	15' east of PH-20 (near industrial sewer at KK36)		

DEPTH (feet)	GRAPHIC LOG	U.S.C.S.	SAMPLE			LITHOLOGIC DESCRIPTION	WATER LEVEL & DATE	REMARKS
			INTERVAL (feet)	% RECOVERY	PID (ppm)			
0 - 4	GP		0 - 4	50		CONCRETE FILL, GRAVELLY SAND, brown (10YR 4/3)		
4 - 6	ML	ML	4 - 6	100		SHALE, gray (2.5Y 5/1), weathered and crushed by geoprobe CLAYEY SILT, olive gray (5Y 5/2) SHALE, gray (2.5Y 5/1), weathered and crushed by geoprobe		
						PROBE REFUSAL AT 6 FEET.		



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LOG OF PROBE HOLE
PH-60

PROJECT NUMBER		PROFESSIONAL	S. McDonald
LOCATION	Syracuse, New York	DATE(S) DRILLED	12/12/2012
DRILLING COMPANY	Zebra	GROUND ELEVATION	
DRILLER	Nick Loncto	DEPTH TO WATER	
DRILLING METHOD	Geoprobe	WATER ELEVATION	
REMARKS	10' south of PH-20 (near industrial sewer at KK36)		

DEPTH (feet)	GRAPHIC LOG	U.S.C.S.	SAMPLE			LITHOLOGIC DESCRIPTION	WATER LEVEL & DATE	REMARKS
			INTERVAL (feet)	% RECOVERY	PID (ppm)			
0 - 1	GP		0 - 1	100		CONCRETE SANDY, GRAVELLY SAPROLITE, olive brown (2.5Y 4/3) PROBE REFUSAL AT 1 FEET.		



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LOG OF PROBE HOLE
PH-61

PROJECT NUMBER		PROFESSIONAL	S. McDonald
LOCATION	Syracuse, New York	DATE(S) DRILLED	12/12/2012
DRILLING COMPANY	Zebra	GROUND ELEVATION	
DRILLER	Nick Loncto	DEPTH TO WATER	
DRILLING METHOD	Geoprobe	WATER ELEVATION	
REMARKS	Adjacent to PH-20 (near industrial sewer at KK36)		

DEPTH (feet)	GRAPHIC LOG	U.S.C.S.	SAMPLE			LITHOLOGIC DESCRIPTION	WATER LEVEL & DATE	REMARKS
			INTERVAL (feet)	% RECOVERY	PID (ppm)			
0	gp	GP	0 - 4	38		CONCRETE GRAVEL/SAND (FILL), very dark grayish brown (10YR 3/2)		
4			4 - 6.5	100		----with black staining with slight oily sheen---- SHALE, gray (5Y 5/1), weathered		
PROBE REFUSAL AT 6.5 FEET.								



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LOG OF PROBE HOLE
PH-62

PROJECT NUMBER		PROFESSIONAL	S. McDonald
LOCATION	Syracuse, New York	DATE(S) DRILLED	12/12/2012
DRILLING COMPANY	Zebra	GROUND ELEVATION	
DRILLER	Nick Loncto	DEPTH TO WATER	
DRILLING METHOD	Geoprobe	WATER ELEVATION	
REMARKS	25' east of PH-16; near in-plant railroad spur on raised dock		

DEPTH (feet)	GRAPHIC LOG	U.S.C.S.	SAMPLE			LITHOLOGIC DESCRIPTION	WATER LEVEL & DATE	REMARKS
			INTERVAL (feet)	% RECOVERY	PID (ppm)			
0 - 4			63			CONCRETE (raised dock) CLAYEY, GRAVELLY SILT (FILL), weak red (10R 5/4), hard		
4 - 8			100					
8 - 12			100			----moist and plastic----		
12 - 16			63			CLAYEY SILT with SHALE fragments, brown (10YR 4/3)		
16 - 20.5			100			----very moist----		Did not produce sufficient groundwater for collection of groundwater sample
						PROBE REFUSAL AT 20.5 FEET.		



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LOG OF PROBE HOLE
PH-63

PROJECT NUMBER		PROFESSIONAL	S. McDonald
LOCATION	Syracuse, New York	DATE(S) DRILLED	12/12/2012
DRILLING COMPANY	Zebra	GROUND ELEVATION	
DRILLER	Nick Loncto	DEPTH TO WATER	
DRILLING METHOD	Geoprobe	WATER ELEVATION	
REMARKS	25' south of PH-16; near in-plant railroad spur		

DEPTH (feet)	GRAPHIC LOG	SAMPLE			LITHOLOGIC DESCRIPTION	WATER LEVEL & DATE	REMARKS
		INTERVAL (feet)	% RECOVERY	PID (ppm)			
0 - 4	GM	0 - 4	75		GRAVELLY SILT, very dark gray (5YR 3/1), with hydrocarbon odor and staining		
		4 - 8	75		CLAYEY SILT, dark reddish brown (2.5YR 3/4)		
PROBEHOLE TERMINATED AT 8 FEET.							



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LOG OF PROBE HOLE
PH-64

PROJECT NUMBER		PROFESSIONAL	S. McDonald
LOCATION	Syracuse, New York	DATE(S) DRILLED	12/12/2012
DRILLING COMPANY	Zebra	GROUND ELEVATION	
DRILLER	Nick Loncto	DEPTH TO WATER	
DRILLING METHOD	Geoprobe	WATER ELEVATION	
REMARKS	25' north of PH-16; near in-plant railroad spur		

DEPTH (feet)	GRAPHIC LOG	U.S.C.S.	SAMPLE			LITHOLOGIC DESCRIPTION	WATER LEVEL & DATE	REMARKS
			INTERVAL (feet)	% RECOVERY	PID (ppm)			
0 - 4	GM		0 - 4	75		FILL, SILT and SLAG, brown (10YR 5/3) ----with black, oily staining/sheen and petroleum odor----		
			4 - 6	100		CLAYEY SILT, dark reddish brown (2.5YR 3/4)		
		ML				PROBEHOLE TERMINATED AT 6 FEET.		



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**LOG OF PROBE HOLE
PH-65**

PROJECT NUMBER		PROFESSIONAL	S. McDonald
LOCATION	Syracuse, New York	DATE(S) DRILLED	12/12/2012
DRILLING COMPANY	Zebra	GROUND ELEVATION	
DRILLER	Nick Loncto	DEPTH TO WATER	
DRILLING METHOD	Geoprobe	WATER ELEVATION	
REMARKS	35' north of PH-64; near in-plant railroad spur		

DEPTH (feet)	GRAPHIC LOG	U.S.C.S.	SAMPLE			LITHOLOGIC DESCRIPTION	WATER LEVEL & DATE	REMARKS		
			INTERVAL (feet)	% RECOVERY	PID (ppm)					
0 - 4	GM		0 - 4	63		GRAVELLY SILT, grayish brown (10YR 5/2) ----with black, oily sheen and hydrocarbon odor----				
			4 - 6	100		CLAYEY SILT, weak red (10R 5/3)				
5										
PROBEHOLE TERMINATED AT 6 FEET.										



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LOG OF PROBE HOLE
PH-66

PROJECT NUMBER		PROFESSIONAL	S. McDonald
LOCATION	Syracuse, New York	DATE(S) DRILLED	12/12/2012
DRILLING COMPANY	Zebra	GROUND ELEVATION	
DRILLER	Nick Loncto	DEPTH TO WATER	
DRILLING METHOD	Geoprobe	WATER ELEVATION	
REMARKS	50' south of PH-63; near in-plant railroad spur		

DEPTH (feet)	GRAPHIC LOG	U.S.C.S.	SAMPLE			LITHOLOGIC DESCRIPTION	WATER LEVEL & DATE	REMARKS
			INTERVAL (feet)	% RECOVERY	PID (ppm)			
0 - 4	ML		0 - 4	100		ASPHALT CLAYEY SILT, mottled reddish brown (2.5YR 5/4) and pale olive (5Y 6/3), with gravel ----with hydrocarbon odor but no visible staining----		
			4 - 6	100				
PROBEHOLE TERMINATED AT 6 FEET.								